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## 2000 City Park Drive Transportation Impact Assessment

Engineering excellence.

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**Proposed Mixed-Use Development  
2000 City Park Drive  
Transportation Impact Assessment**

Prepared By:

**NOVATECH**

Suite 200, 240 Michael Cowpland Drive  
Ottawa, Ontario  
K2M 1P6

May 2023

*Revised November 2023*

*Revised May 2025*

Novatech File: 123006

Ref: R-2023-017

May 30, 2025

City of Ottawa  
Planning and Growth Management Department  
110 Laurier Ave. W., 4<sup>th</sup> Floor,  
Ottawa, Ontario K1P 1J1

**Attention: Mr. Mike Giampa**  
**Project Manager, Transportation Review**

Dear Mr. Giampa:

**Reference: 2000 City Park Drive**  
**Transportation Impact Assessment**  
**Novatech File No. 123006**

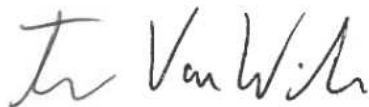
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We are pleased to submit the following revised Transportation Impact Assessment Report, in support of Official Plan Amendment and Zoning By-law Amendment applications at 2000 City Park Drive, for your review and signoff. The TIA has been updated to remove the Phase 2 development at 1900 City Park Drive. The revisions did not change the findings of the report. The structure and format of this report is in accordance with the City of Ottawa Transportation Impact Assessment Guidelines (June 2017).

If you have any questions or comments regarding this report, please feel free to contact Brad Byvelds, or the undersigned.

Yours truly,

**NOVATECH**



Trevor Van Wiechen, P.Eng.  
Project Engineer | Transportation



## **TIA Plan Reports**

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

### **CERTIFICATION**

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
4. I am either a licensed<sup>1</sup> or registered<sup>2</sup> professional in good standing, whose field of expertise [check ☒ appropriate field(s)] is either transportation engineering ☒ or transportation planning ☐.

**1,2 License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.**

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Dated at Ottawa this 30 day of May, 2025 .  
(City)

Name: Brad Byvelds  
(Please Print)

Professional Title: P. Eng. - Project Manager

*B. Byvelds*

\_\_\_\_\_  
Signature of Individual certifier that s/he meets the above four criteria

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## EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of Official Plan Amendment and Zoning By-law Amendment applications for the property located at 2000 City Park Drive. The subject site is currently vacant. The subject site is surrounded by the following:

- City Park Drive and residential lands to the north,
- Highway 174 to the south,
- Residential and commercial land uses to the east, and
- An existing office building and City Centre Park to the west.

The City of Ottawa's Official Plan identifies the subject site is within the Outer Urban Transect and has 'Hub' and 'Evolving Neighbourhood' designations on Schedule B3. 2000 City Park Drive is currently zoned 'Transit Oriented Development' (TD2).

For the purposes of this TIA, the proposed development is anticipated to include approximately 1,192 residential units within five buildings. This is considered the maximum density for the subject site. The final development statistics and access locations for each building will be confirmed as part of future Site Plan Control applications for the development phases. A preliminary concept plan for the subject site is provided in **Appendix A**. The subject site is anticipated to be developed in one phase with an assumed build-out year of 2037.

The conclusions and recommendations of this TIA can be summarized as follows:

### Forecasting

- The proposed development is anticipated to generate a net additional 505 person trips during the AM peak hour (including 114 vehicle trips), and an additional 499 person trips during the PM peak hour (including 118 vehicle trips). Compared to the previous concept plan, the proposed development results in a net reduction in person and vehicle trips.

### Development Design

- The proposed development is anticipated to include one new vehicular access to City Park Drive and one shared access with the adjacent office building at 1900 City Park Drive. Pedestrian connections are anticipated to be provided to the MUP's east and south of the site, as well as to the sidewalks along City Park Drive.

### Transportation Demand Management (TDM)

- A review of the City's TDM Measures Checklist has been conducted by the proponent, who will consider the following TDM measures on a phase by phase basis within this development:
  - Display local area maps with walking/cycling access routes and key destinations at major entrances;
  - Display relevant transit schedules and route maps at entrances;
  - Unbundle parking from purchase cost (condo) or monthly rent (apartment); and
  - Provide multi-modal travel information package to new residents.

### Neighbourhood Traffic Management

- Traffic generated by the proposed development is anticipated to increase traffic along City Park Drive at Ogilvie Road/Bathgate Drive by 29-30 vehicles, or one vehicle every two

minutes during peak hours. Traffic at City Park Drive at Ogilvie Road/1941 Ogilvie Road is anticipated to increase by 85-89 vehicles, or one to two vehicles a minute during peak hours.

- Since City Park Drive is expected to have lower volumes close to the subject site, no neighbourhood traffic management measures have been recommended as part of this proposed development.

#### Transit

- The proposed development is anticipated to generate an additional 262 transit trips during the AM peak hour and an additional 252 transit trips during the PM peak hour. The additional transit trips generated by the proposed development are anticipated to have a marginal impact on the current transit operations surrounding the site.
- A total of 14-22 people are anticipated to cross the street to Stop #4447 during the peak hours. As the existing transit stop is considered a desire line for pedestrians from the proposed development, consideration should be given to providing a pedestrian crossover along City Park Drive as the development advances. The timing for implementation of a future pedestrian crossover will be reviewed on a phase-by-phase basis through future Site Plan Control applications.

#### Network Concept

- The additional traffic generated by the subject site is not anticipated to have a significant impact on the overall operations of Blair Road or Ogilvie Road. Peak directional traffic along all roadways are anticipated to meet the target LOS E under the 2037 total traffic conditions.

#### Intersection MMLOS

- None of the study area intersections meet the target PLOS. There is limited opportunity to improve the PLOS at all intersections without reducing the number of lanes crossed;
- None of the study area intersections meet the target BLOS except for Ogilvie Road/Cadboro Road. There is limited opportunity to improve the BLOS at all intersections without providing two-stage left turning cycling facilities;
- All of the study area intersections meet the target TLOS except for Ogilvie Road/City Park Drive/Bathgate Drive, Ogilvie Road/City Park Drive, Ogilvie Road/Blair Road, and HWY 174 Westbound off-ramp/Blair Road;
- None of the study area intersections meet the target TkLOS except for HWY 174 Westbound off-ramp/Blair Road and HWY 174 Eastbound off-ramp/Blair Road; and
- All intersections meet the target AutoLOS except for Ogilvie Road/Blair Road.

#### Background Traffic Analysis

- The westbound left turning movement and northbound through movements at the Ogilvie Road/Blair Road intersection do not meet the target LOS E during the AM peak hour and the northbound right, westbound left, eastbound right and eastbound through movements do not meet the target LOS E in the PM peak hour. All other intersections within the study area are expected to meet the City's target.

- During the AM peak hour at the Ogilvie Road/Blair Road intersection, the average and maximum queue lengths of the westbound left movement exceed the current storage capacity. Additionally, the maximum queue lengths of the northbound left, the northbound through, and the southbound left turn movements exceed the existing storage capacity.
- During the PM peak hour at the Ogilvie Road/Blair Road intersection, the average and maximum queue lengths of the northbound right, the southbound through/right, and the westbound left movements and the maximum queue length for the southbound left turn movement exceed the existing storage length.

#### Total Traffic Analysis

- Traffic generated by the proposed development is anticipated to have marginal operational effects within the study area. The discussion of over-capacity movements and queue lengths are generally consistent with the background traffic analysis.
- Monitoring of collisions associated with the westbound left turn movement should be completed by the City as this development proceeds. Should the westbound left turn collision pattern continue, consideration by the City could be given for implementing a fully protected left turn phase. While queueing does increase under fully protected phasing the 95th percentile queues in the left turning lanes could be supported by existing storage lengths at the intersection.

Based on the foregoing, the proposed development can be recommended from a transportation perspective.

## 1.0 SCREENING

### 1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared in support of Official Plan Amendment and Zoning By-law Amendment applications for the property located at 2000 City Park Drive. The subject site is currently vacant. The subject site is surrounded by the following:

- City Park Drive and residential lands to the north,
- Highway 174 to the south,
- Residential and commercial land uses to the east, and
- An existing office building and City Centre Park to the west.

An aerial photo of the subject site is provided in **Figure 1** below.

**Figure 1: Site Location**



## 1.2 Proposed Development

The City of Ottawa's Official Plan identifies the subject site is within the Outer Urban Transect and has 'Hub' and 'Evolving Neighbourhood' designations on Schedule B3. 2000 City Park Drive is currently zoned 'Transit Oriented Development' (TD2).

For the purposes of this TIA, the proposed development is anticipated to include approximately 1,192 residential units within five buildings. This is considered the maximum density for the subject site. The final development statistics and access locations for each building will be confirmed as part of future Site Plan Control applications for the development phases. A preliminary concept plan for the subject site is provided in **Appendix A**. The subject site is anticipated to be developed in one phase with an assumed build-out year of 2037.

## 1.3 Screening Form

The City's 2017 TIA Guidelines identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form, which is included in **Appendix B**. The trigger results are as follows:

- Trip Generation Trigger – The development is expected to generate more than 60 person trips/peak hour; further assessment **is required** based on this trigger.
- Location Triggers – The development is located within 600m of a transit station and is located in the Blair TOD Zone; further assessment **is required** based on this trigger.
- Safety Triggers – The development proposes no new accesses and does not flag any safety triggers; further assessment **is not required** based on this trigger.

## 2.0 SCOPING

### 2.1 Existing Conditions

#### 2.1.1 Roadways

All roadways within the study area fall under the jurisdiction of the City of Ottawa.

City Park Drive is a collector road that loops to the south of Ogilvie Road. Within the study area, City Park Drive has a two-lane undivided urban cross-section, concrete sidewalks on both sides of the road, and an unposted regulatory speed limit of 50km/hr. The City's Official Plan does not identify a right-of-way protection along City Park Drive.

Ogilvie Road is an arterial road that runs in an east-west direction between Montreal Road and St. Laurent Boulevard. North of Montreal Road, Ogilvie Road continues as a major collector roadway to Quincy Avenue. Within the study area, Ogilvie Road has a four-lane divided urban cross-section, concrete sidewalks and bike lanes on both sides of the road and a posted speed limit of 60km/h.

Bathgate Drive is a collector road that runs in a north-south direction between Montreal Road and Ogilvie Road. Within the study area, Bathgate Road has a two-lane undivided urban cross-section, concrete sidewalks on both sides of the road and a posted speed limit of 40km/h.

Blair Road is an arterial road that runs in a north-south direction between Montreal Road and Innes Road. North of Montreal Road, Blair Road continues as a major collector roadway. To the north of Ogilvie Road, Blair Road has a two-lane undivided urban cross-section, a concrete sidewalk on the east side, and a posted speed limit of 50km/h. To the south of Ogilvie Road, Blair Road has a four-lane divided urban cross-section, concrete sidewalks on both sides of the road, and a posted speed limit of 70km/h.

Matheson Road is a collector road that runs in a north-south direction between Bathgate Drive and Ogilvie Road. North of Ogilvie Road, Matheson Road has a two-lane undivided urban cross-section, concrete sidewalks on both sides of the road and a posted speed limit of 40km/h.

Palmerston Drive is a local road that runs in a north-south direction between Ogilvie Road and Halmont Drive. Within the study area, Palmerston Drive has a two-lane undivided urban cross-section, concrete sidewalk on the east side of the road and a posted speed limit of 40km/h.

Highway 174 is a city freeway that runs in an east-west direction. Highway 174 has a divided four-lane cross-section and a posted speed limit of 100km/hr.

### 2.1.2 Intersections

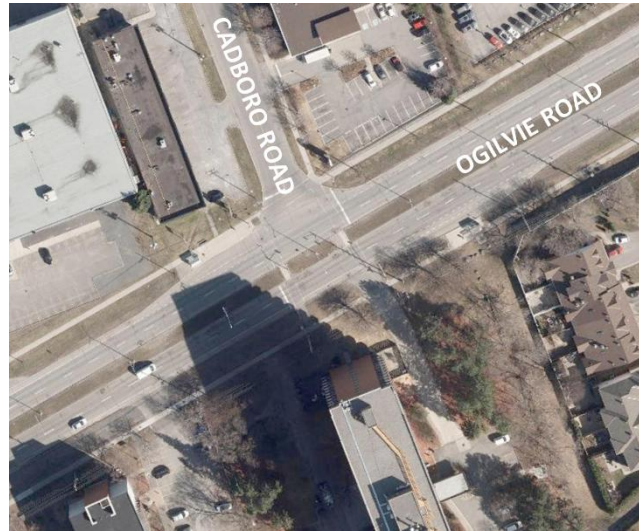
#### Ogilvie Rd/Matheson Rd/Palmerston Dr

- Signalized four-legged intersection
- Northbound Approach (Palmerston Drive): one left turn lane and one shared through/right turn lane
- Southbound Approach (Matheson Road): one shared through/left turn lane and one channelized right turn lane
- Eastbound/Westbound Approach (Ogilvie Road): one left turn lane, one through lane, and one shared through/right turn lane
- Standard crosswalks are provided on each approach
- Bike lanes are provided on the eastbound and westbound approaches
- Bus bay's are provided in the southeast and northwest corners of the intersection



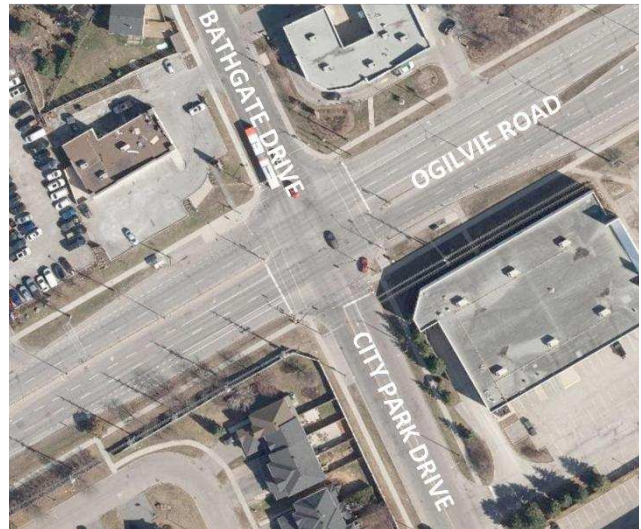
Ogilvie Rd/Cadboro Rd

- Signalized three-legged intersection
- Southbound Approach (Cadboro Road): one right turn lane
- Eastbound Approach (Ogilvie Road): two through lanes
- Westbound Approach (Ogilvie Road): one through lane and one shared through/right turn lane
- Standard crosswalks are provided on each approach
- Bike lanes are provided on the eastbound and westbound approaches
- A bus bay is provided on each of the northwest and southeast corners of the intersection
- A roughly 4.5m wide centre island pedestrian refuge is available for pedestrians crossing from north-south
- The southbound left turn movement is prohibited by the centre median island



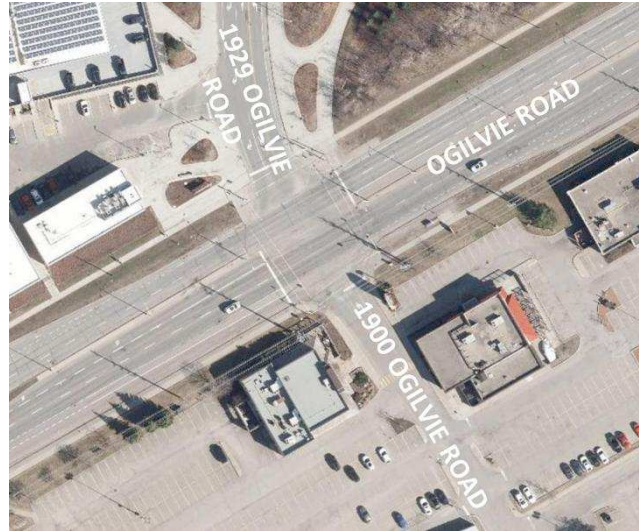
Ogilvie Rd/Bathgate Dr/City Park Dr

- Signalized four-legged intersection
- Northbound/Southbound Approach (Bathgate Drive/City Park Drive): one left turn lane and one shared through/right turn lane
- Eastbound/Westbound Approach (Ogilvie Road): one left turn lane, two through lanes, and one right turn lane
- Standard crosswalks are provided on each approach
- Pocket bike lanes are provided on the eastbound and westbound approaches
- A bus bay is provided in the northwest corner of the intersection
- U-turns are prohibited on the westbound Ogilvie Road approach

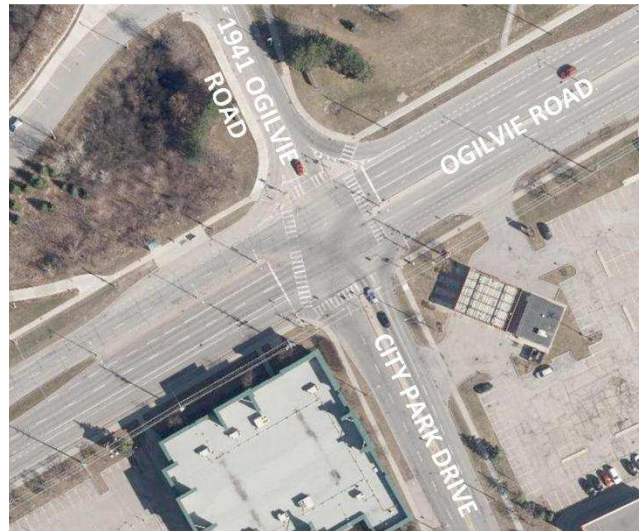


Ogilvie Rd/1929 Ogilvie Rd/1900 Ogilvie Rd

- Signalized four-legged intersection
- Northbound Approach (1900 Ogilvie Road): one left turn lane and one shared through/right turn lane
- Southbound Approach (1929 Ogilvie Road): one shared through/left turn lane and one right turn lane
- Eastbound Approach (Ogilvie Road): one left turn lane, two through lanes, and one right turn lane
- Westbound Approach (Ogilvie Road): one left turn lane, one through lane, and one shared through/right turn lane
- Standard crosswalks are provided on each approach
- A bike lane/pocket bike lane is provided on the eastbound and westbound approach

Ogilvie Rd/City Park Dr/1941 Ogilvie Rd

- Signalized four-legged intersection
- Northbound Approach (City Park Drive): one shared through/left turn lane, and one right turn lane
- Southbound Approach (1941 Ogilvie Road): one left turn lane and one shared through/channelized right turn lane
- Westbound Approach (Ogilvie Road): one left turn lane, two through lanes, and one channelized right turn lane
- Eastbound Approach (Ogilvie Road): one left turn lane, two through lanes, and one right turn lane
- Painted zebra crosswalks are provided on all approaches
- Pocket bike lanes are provided on the eastbound and westbound approach
- A bus bay is provided in the northwest corner of the intersection



Ogilvie Road/1980 Ogilvie Road

- Intersection pedestrian signal crossing Ogilvie Road
- Northbound Approach (1980 Ogilvie Road): one right turn lane
- Eastbound Approach (Ogilvie Road): two through lanes and one right turn lane
- Westbound Approach (Ogilvie Road): two through lanes
- A bike lane/pocket bike lane is provided on the eastbound and westbound approaches
- A roughly 2.0m wide centre island pedestrian refuge is available for pedestrians crossing from north-south
- The northbound left turn movement is prohibited by the centre median island



Ogilvie Rd/Blair Rd

- Signalized four-legged intersection
- Northbound Approach (Blair Road): two left turn lanes, one through lane, and one channelized right turn lane
- Southbound Approach (Blair Road): one left turn lane, one through lane, and one shared through/right turn lane
- Eastbound Approach (Ogilvie Road): one left turn lane, two through lanes, and one channelized right turn lane
- Westbound Approach (Ogilvie Road): two left turn lanes, one through lane, and one shared through/right turn lane
- Standard crosswalks are provided on all approaches.
- A bike lane/pocket bike lane is provided on the eastbound and southbound approach



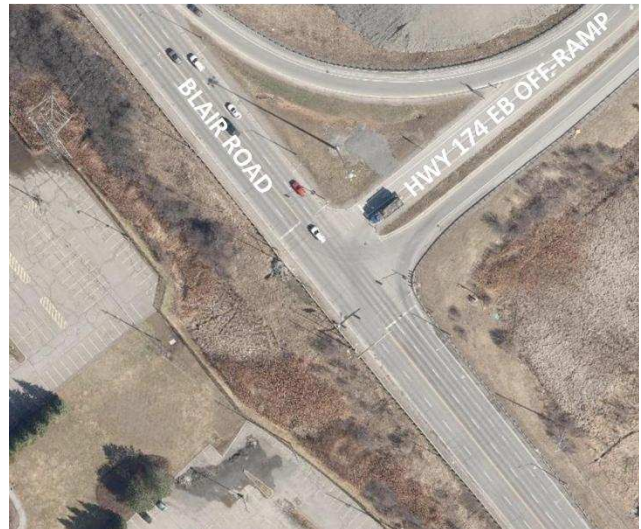
Blair Rd/Highway 174 WB off-ramp/  
1980 Ogilvie Rd

- Signalized four-legged intersection
- Northbound Approach (Blair Road): two left turn lanes and two through lanes
- Southbound Approach (Blair Road): three through lanes and one channelized right turn lane
- Westbound Approach (Hwy 174 WB off-ramp): one left turn lane, two through lanes, and one right turn lane
- Eastbound Approach (1980 Ogilvie Road): one left turn lane and one right turn lane
- Standard crosswalks are provided on the southbound, westbound, and eastbound approaches.



Blair Road/Highway 174 EB off-ramp

- Signalized three-legged intersection
- Northbound Approach (Blair Road): two through lanes and one right turn lane
- Southbound Approach (Blair Road): one through lane and one shared through/left turn lane
- Westbound Approach (Hwy 174 EB off-ramp): one left turn lane, one bus lane, and one by-pass right turn lane
- Standard crosswalks are provided on all approaches.



### 2.1.3 Driveways

A review of adjacent driveways along the boundary roads are provided as follows:

**City Park Drive, South Side:**

- One Driveway to City Centre Park
- One driveway to 1820 City Park Drive
- Two driveways to Frontier developments at 2280 City Park Drive
- One driveway to shopping mall at 1980 Ogilvie Road
- One driveway to gas station at 1970 Ogilvie Road

**City Park Drive, North Side:**

- Four driveways to commercial development at 1900 City Park Drive
- One driveway to residential parking for 4461 Harper Avenue
- One driveway to residential parking for 4430 Harper Avenue

### 2.1.4 Pedestrian and Cycling Facilities

Sidewalks within the study area are summarized as follows:

- Both sides of Ogilvie Road, City Park Drive, Matheson Road, Bathgate Drive, and Blair Road between Ogilvie Road and Highway 174 Westbound off-ramp; and
- The east side of Palmerston Drive and Blair Road north of Ogilvie Road.

In the City of Ottawa's primary cycling network, Ogilvie Road and Blair Road are classified as Spine Routes. City Park Drive is classified as a local route to the west of the proposed development and is classified as a pathway link to the east of the proposed development. Bike lanes are provided on both sides of Ogilvie Road. Off-road pathways are provided through City Centre Park, connecting City Park Drive to Halmont Drive/Palmerston Drive.

### 2.1.5 Transit

The closest OC Transpo bus stops that serve various routes in the vicinity of the subject site are described in **Table 1** and are shown in **Figure 2**. A summary of OC Transpo routes which serve the study area is included in **Table 2**. Detailed route information and an excerpt from the OC Transpo System Map are included in **Appendix C. Tables 1 and 2** and **Figure 2** have been updated as per the New Ways to Bus. Based on a comparison of the previous routes offered near the site and the new ways to bus, Routes 28, 31, 231, 232, and 236 have been removed and Routes 226 and 621 have been added.

**Table 1: OC Transpo Transit Stops**

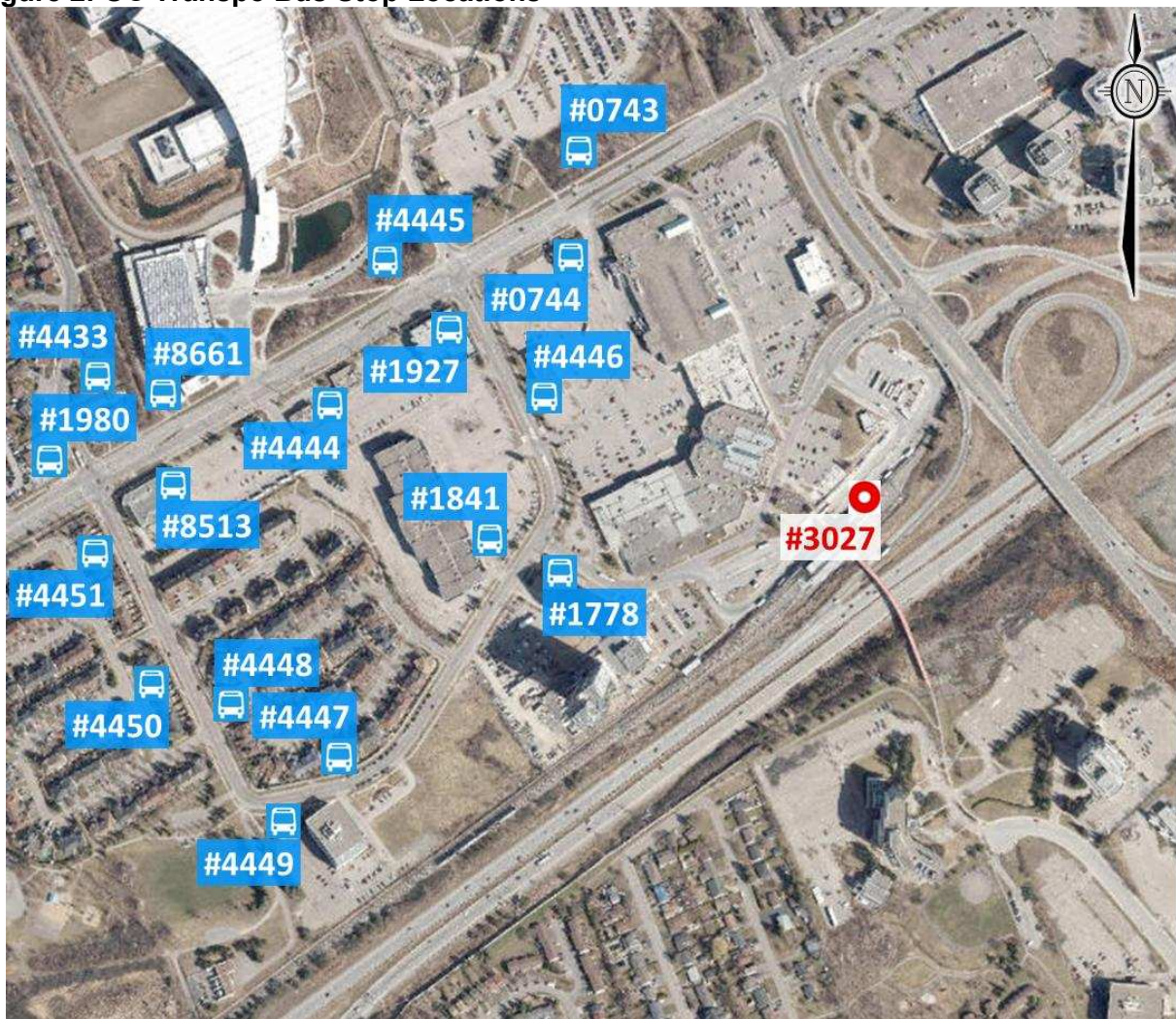
| Stop  | Location                                                                                    | Routes Served                                                                                                             |
|-------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| #1778 | South corner of City Park Drive/Blair Station access road                                   | 15, 25                                                                                                                    |
| #1841 | North side of City Park Drive mid-block between Frontier Path Private and Ambassador Avenue | 15, 25                                                                                                                    |
| #4433 | Northeast of City Park Drive/Bathgate Drive                                                 | 15, 25, 633                                                                                                               |
| #4447 | North side of City Park Drive near 1900 City Park Drive                                     | 15, 25                                                                                                                    |
| #4448 | Northeast of City Park Drive/Jobin Crescent                                                 | 15, 25                                                                                                                    |
| #4449 | South side of City Park Drive near 1900 City Park Drive                                     | 15, 25                                                                                                                    |
| #4450 | West side of City Park Drive mid-block between Wilbury Road and Jobin Crescent              | 15, 25                                                                                                                    |
| #4451 | Southwest corner of Ogilvie Road/City Park Drive/Bathgate Drive                             | 15, 25                                                                                                                    |
| #1927 | Southwest corner of Ogilvie Road/City Park Drive                                            | 12, 23, 24, 35, 39, 619, 621, 624, 630, 631                                                                               |
| #4446 | East side of City Park Drive and 130m south of Blair Road                                   | 12, 23, 24, 26, 35, 39, 619, 621, 624, 630, 631                                                                           |
| #1980 | Northwest corner of Ogilvie Road/City Park Drive/Bathgate Drive                             | 24, 39, 624, 633                                                                                                          |
| #8513 | Southeast corner of Ogilvie Road/City Park Drive/Bathgate Drive                             | 24, 39, 624, 633                                                                                                          |
| #3027 | Blair Station                                                                               | 1, 12, 15, 21, 23, 24, 25, 26, 30, 32, 33, 34, 35, 38, 39, 42, 221, 222, 226, 228, 234, 237, 619, 621, 624, 628, 630, 631 |

**Table 2: OC Transpo Route Information**

| <b>Route</b>          | <b>From ↔ To</b>                              | <b>Frequency</b>                                                                                            |
|-----------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>1</b>              | Tunney's Pasture ↔ Blair                      | 5-minute headways, 7-days per week                                                                          |
| <b>12<sup>1</sup></b> | Blair ↔ St-Laurent                            | 15-minute headways, 7-days per week all day service                                                         |
| <b>15<sup>1</sup></b> | Blair ↔ Parliament                            | 15-minute headways, 7-days per week all day service                                                         |
| <b>21</b>             | Canotek ↔ Blair                               | Monday-Friday, Routes offered in peak direction of travel                                                   |
| <b>23</b>             | Rothwell Heights ↔ Blair                      | 30-minute headways, Monday-Friday limited service                                                           |
| <b>24</b>             | Beacon Hill ↔ St-Laurent                      | 30-minute headways, 7-days per week all day service                                                         |
| <b>25</b>             | La Cité ↔ Millennium                          | 10-minute headways, 7-days per week all day service                                                         |
| <b>26</b>             | Pineview ↔ Blair                              | 30-minute headways, 7-days per week all day service                                                         |
| <b>30</b>             | Blair ↔ Millennium                            | 30-minute headways, 7-days per week all day service                                                         |
| <b>32</b>             | Blair ↔ Chapel Hill                           | 30-minute headways, Monday-Friday Routes offered in peak direction of travel                                |
| <b>33</b>             | Blair ↔ Portobello                            | 30-minute headways, 7-days per week, all day service and select trips in the evening                        |
| <b>35</b>             | Blair ↔ Esprit                                | 30-minute headways, 7-days per week, all day service                                                        |
| <b>38</b>             | Blair ↔ Jeanna d'Arc/Trim                     | 30-minute headways, 7-days per week, all day service                                                        |
| <b>39</b>             | Blair & N Rideau ↔ Millennium                 | 15-minute headways, 7-days per week, all day service and overnight service                                  |
| <b>42</b>             | Blair ↔ Hurdman                               | 30-minute headways, 7-days per week, no evening service on weekends and no late evening service on weekdays |
| <b>221</b>            | Blair ↔ Cumberland                            | 30-minute headways, Monday to Friday, Routes offered in peak direction of travel during peak periods        |
| <b>222</b>            | Blair ↔ Vars                                  | 30-minute headways, Monday to Friday, Routes offered in peak direction of travel during peak periods        |
| <b>226</b>            | Chapel Hill ↔ Blair                           | Monday-Friday, Routes offered in peak direction of travel                                                   |
| <b>228</b>            | Blair ↔ Navan-Sarsfield                       | 30-minute headways, Monday to Friday, Routes offered in peak direction of travel during peak periods        |
| <b>234</b>            | Blair ↔ Tenth Line                            | 30-minute headways, Monday to Friday, Routes offered in peak direction of travel during peak periods        |
| <b>237</b>            | Blair ↔ Jeanna d'Arc                          | 60-minute headways, Monday to Friday, Routes offered in peak direction of travel during peak periods        |
| <b>619</b>            | Louis Riel ↔ Blair                            | One school bus route per day each direction Monday-Friday                                                   |
| <b>621</b>            | Bearbrook ↔ Colonel By H.S.                   | Three school bus routes per day each direction Monday-Friday                                                |
| <b>624</b>            | Gloucester H.S. ↔ Rideau                      | One school bus route per day each direction Monday-Friday                                                   |
| <b>628</b>            | Louis Riel                                    | Four school bus routes in the morning, Monday-Friday                                                        |
| <b>630</b>            | Blair/Colonel By/Gloucester H.S. ↔ Millennium | One school bus route per day each direction Monday-Friday                                                   |
| <b>631</b>            | Colonel By/Gloucester H.S. ↔ Chapel Hill      | One school bus route per day each direction Monday-Friday                                                   |
| <b>633</b>            | Lester B Pearson ↔ St-Laurent                 | One school bus route per day each direction Monday-Friday                                                   |

1. As of April 23, 2023, Routes 12 and 15 have returned to their pre-construction schedule and routing.

Figure 2: OC Transpo Bus Stop Locations



### 2.1.6 Area Traffic Management

There are no Area Traffic Management (ATM) studies within the study area that have been completed or are currently in progress.

The following traffic calming measures are currently in place within the study area:

- Matheson Road: 40KMHR MAX pavement markings, midblock and intersection narrowings, and flex posts
- Bathgate Drive: midblock and intersection narrowings and flex posts
- Palmerston Drive: 40KMHR MAX pavement markings
- Full signalization at the Ogilvie Road/Cadboro Road intersection and a Mid-Block Pedestrian Signal (MPS) at Ogilvie Road mid-block between Blair Road and City Park Drive East.

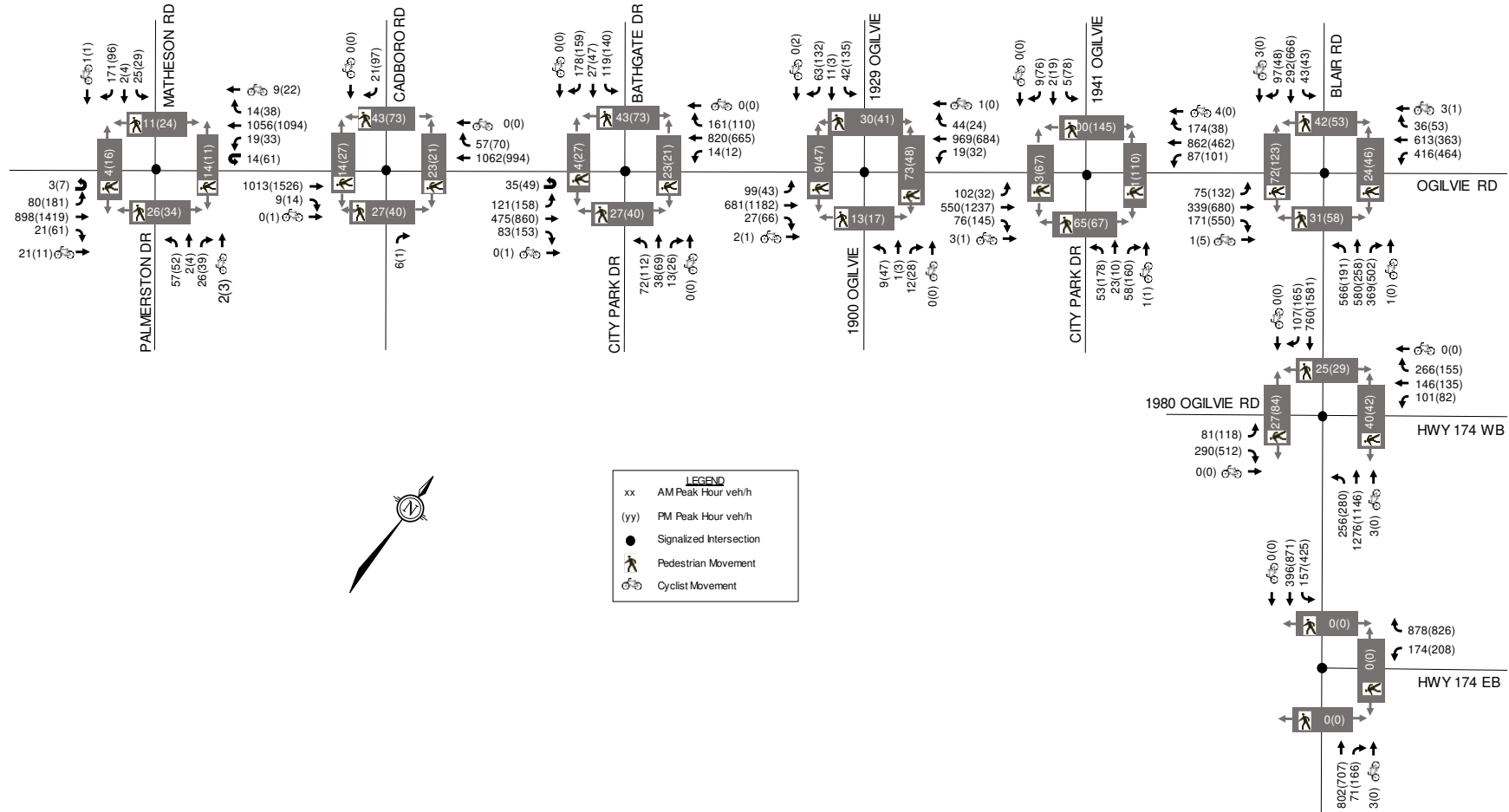
### 2.1.7 Existing Traffic Volumes

Weekday traffic counts were used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at the study area intersections. These counts were completed on the dates listed below:

|                                                  |                   |
|--------------------------------------------------|-------------------|
| • Blair Road/Highway 174 EB off-ramp             | March 22, 2023    |
| • Blair Road/Highway 174 WB off-ramp             | March 22, 2023    |
| • Blair Road/Ogilvie Road                        | April 24, 2019    |
| • Blair Road/185m East of Bathgate Drive         | January 16, 2019  |
| • Ogilvie Road/Bathgate Drive/City Park Drive    | February 10, 2020 |
| • Ogilvie Road/Cadboro Road                      | January 9, 2019   |
| • Ogilvie Road/City Park Drive/1941 Ogilvie Road | January 9, 2019   |
| • Ogilvie Road/Matheson Road/Palmerston Drive    | May 9, 2017       |

Observed weekday AM and PM peak hour traffic volumes at the study area intersections are shown in **Figure 3**. Peak hour summary sheets of the above traffic counts are included in **Appendix D**.

Figure 3: Existing Traffic Volumes



### 2.1.8 Collision Records

Historical collision data from the last five years were obtained from the City's Public Works and Service Department for the study area intersections. Copies of the collision summary reports are included in **Appendix E**.

The collision data have been evaluated to identify collision patterns, which are defined in the 2017 TIA Guidelines as more than six collisions in five years for any one movement. **Table 3** summarizes the number of collisions at each intersection from January 1, 2016 to December 31, 2020. During the five-year period there were no reported fatal collisions in the analyzed area.

**Table 3: Reported Collisions**

| Intersection/<br>Street Segment                                                                        | Collision Types |       |             |           |                     |                               | Total |
|--------------------------------------------------------------------------------------------------------|-----------------|-------|-------------|-----------|---------------------|-------------------------------|-------|
|                                                                                                        | Approaching     | Angle | Rear<br>End | Sideswipe | Turning<br>Movement | SMV <sup>(1)</sup> /<br>Other |       |
| Ambassador Avenue/City Park Drive                                                                      | -               | 1     | 1           | -         | -                   | -                             | 2     |
| Blair Road/Ogilvie Road                                                                                | -               | 1     | 65          | 12        | 1                   | 5                             | 84    |
| Blair Road/Highway 174 Westbound On-Ramp                                                               | -               | -     | 1           | -         | -                   | 1                             | 2     |
| Blair Road/Highway 174 Eastbound Off-Ramp                                                              | -               | -     | 2           | -         | -                   | -                             | 2     |
| Blair Road/Highway 174 Westbound Off-Ramp/1980 Ogilvie Road                                            | -               | 10    | 37          | 5         | 10                  | 4                             | 66    |
| Blair Road/Highway 174 Eastbound Off-ramp                                                              | 2               | 3     | 21          | 5         | 17                  | 6                             | 54    |
| Blair Road between Ogilvie Road and Highway 174 Westbound Off-Ramp/1980 Ogilvie Road                   | -               | -     | 5           | 3         | -                   | -                             | 8     |
| Blair Road between Highway 174 Westbound Off-Ramp/1980 Ogilvie Road and Highway 174 Westbound On-Ramps | -               | -     | 1           | 1         | -                   | -                             | 2     |
| Blair Road between Highway 174 Westbound On-Ramps and Highway 174 Eastbound Off-Ramp                   | -               | -     | 2           | -         | -                   | -                             | 2     |
| Blair Road between Highway 174 Eastbound Off-Ramp and Highway 174 Eastbound On/Off-Ramp intersection   | -               | -     | 1           | -         | -                   | 1                             | 2     |
| Cadboro Road/Ogilvie Road                                                                              | -               | -     | 7           | -         | -                   | 2                             | 9     |
| City Park Drive/Wilbury Rd/Harper Ave                                                                  | -               | -     | -           | -         | -                   | 1                             | 1     |
| City Park Drive between Ambassador Avenue and Ogilvie Road                                             | -               | 1     | -           | 1         | 3                   | 1                             | 6     |
| City Park between Ogilvie Road and Wilbury Road                                                        | -               | -     | -           | -         | 1                   | 1                             | 2     |
| Ogilvie Road/1900 Ogilvie Road/1929 Ogilvie Road                                                       | -               | -     | 1           | -         | -                   | -                             | 1     |
| Ogilvie Road at pedestrian signal 240m west of Blair Road                                              | -               | -     | 6           | -         | -                   | -                             | 6     |

| Intersection/<br>Street Segment                                                                  | Collision Types |       |             |           |                     |                               | Total |
|--------------------------------------------------------------------------------------------------|-----------------|-------|-------------|-----------|---------------------|-------------------------------|-------|
|                                                                                                  | Approaching     | Angle | Rear<br>End | Sideswipe | Turning<br>Movement | SMV <sup>(1)</sup> /<br>Other |       |
| Ogilvie Road/Bathgate Drive/City Park Drive                                                      | 1               | 6     | 10          | 5         | 9                   | 6                             | 37    |
| Ogilvie Road/City Park Drive East/1941 Ogilvie Road                                              | -               | 1     | 9           | -         | 12                  | 2                             | 24    |
| Ogilvie Road/Matheson Road/Palmerston Drive                                                      | -               | 3     | 8           | -         | 4                   | 4                             | 19    |
| Ogilvie Road between City Park Drive West/Bathgate Drive and Cadboro Road                        | -               | 1     | 3           | -         | -                   | 2                             | 6     |
| Ogilvie Road between City Park Drive West/Bathgate Drive and 1929 Ogilvie Road/1900 Ogilvie Road | -               | -     | 4           | 2         | -                   | -                             | 6     |
| Ogilvie Road between 1929 Ogilvie Road/1900 Ogilvie Road and City Park Drive East                | -               | -     | 1           | 1         | -                   | -                             | 2     |
| Ogilvie Road between Blair Road and City Park Drive East                                         | -               | 1     | 2           | 2         | -                   | 2                             | 7     |
| Ogilvie Road between Cadboro Road and Matheson Road                                              | -               | 1     | 3           | 1         | -                   | 2                             | 7     |

1. SMV = Single Motor Vehicle

#### Blair Road/Ogilvie Road

A total of 84 collisions were reported at this intersection over the last five years, of which there were one angle collision, 65 rear end collisions, 12 sideswipe collisions, one turning movement collisions, and five single-vehicle/other collisions. Nine of the collisions involved an injury and none involved a fatality. None of the collisions involved cyclists or pedestrians.

Of the 84 collisions at this location, nine of them occurred during rain conditions, six of them occurred during snow conditions, and one occurred during freezing rain conditions, for all other collisions weather was not a factor. Additionally, of the 84 collisions, 58 of them occurred during daylight hours.

Of the 65 rear end collisions, 26 involved northbound vehicles, 16 involved southbound vehicles, 22 involved eastbound vehicles, and 20 involved westbound vehicles. The rear end collision patterns at this intersection are anticipated to be attributable to high traffic volumes and congestion during peak periods.

Of the 12 side swipe collisions, two involved northbound vehicles, two involved southbound vehicles, three involved eastbound vehicles, and five involved westbound vehicles.

Calculations of the intersection collision rate per Million Entering Vehicles (MEV) for all collision types across the five-year study period showed an intersection collision rate of 1.08/MEV. Based on this analysis, Blair Road/Ogilvie Road does not experience an abnormally high rate of collisions.

#### Blair Road/Highway 174 Westbound Off-Ramp/1980 Ogilvie Road

A total of 66 collisions were reported at this intersection over the last five years, of which there were ten angle collisions, 37 rear end collisions, five sideswipe collisions, ten turning movement collisions, and four single-vehicle/other collisions. Thirteen of the collisions involved an injury and none involved a fatality. None of the collisions involved cyclists and two of the collisions involved a

pedestrian. Both collisions involving a pedestrian occurred during rainy nighttime conditions with an eastbound left turning vehicle failing to yield the right-of-way.

Of the 66 collisions at this location, 13 of them occurred during rain conditions, four of them occurred during snow conditions, and one occurred during freezing rain conditions, for all other collisions weather was not a factor. Additionally, of the 66 collisions, 47 of them occurred during daylight hours.

Of the ten angle collisions, five involved northbound and westbound vehicles, four involved southbound and westbound vehicles, and one involved a southbound and eastbound vehicle.

Of the 37 rear end collisions, two involved northbound vehicles, 16 involved southbound vehicles, one involved eastbound vehicles, and 18 involved westbound vehicles.

Southbound rear end collisions at this location could be attributed to high southbound traffic volumes. Westbound rear end collisions at this location could be attributed to a combination of the horizontal curvature of the road impacting sight lines, high traffic volumes, and the slight downward grade impacting stopping distance.

Of the ten turning movement collisions, northbound left turning vehicles, five involved eastbound left turning vehicles, and one involved a westbound left turning vehicle.

Calculations of the intersection collision rate per MEV for all collision types across the five-year study period showed an intersection collision rate of 0.77/MEV. Based on this analysis, Blair Road/Highway 174 Westbound Off-Ramp/1980 Ogilvie Road does not experience an abnormally high rate of collisions.

#### *Blair Road/Highway 174 Eastbound Off-ramp*

A total of 54 collisions were reported at this intersection over the last five years, of which there were two approaching collisions, three angle collisions, 21 rear end collisions, five sideswipe collisions, 17 turning movement collisions, five single vehicle collisions, and one other type collision. Thirteen of the collisions involved an injury and none involved a fatality. None of the collisions involved cyclists or pedestrians.

Of the 54 collisions at this location, 13 of them occurred during rain conditions and three of occurred during snow conditions, for all other collisions weather was not a factor. Additionally, of the 54 collisions, 34 of them occurred during daylight hours.

Of the 21 rear end collisions, five involved northbound vehicles, ten involved southbound vehicles, four involved eastbound vehicles, and two involved westbound vehicles.

Southbound rear end collisions at this location could be attributed to a slight downward grade impacting stopping distance and sight lines.

Of the 17 turning movement collisions, 16 involved southbound left turning vehicles and one involved a northbound vehicle performing a U-turn. Southbound turning movement collisions at this location could be attributed to the permitted left turn movement crossing multiple lanes of oncoming traffic with high volumes of southbound left turning vehicles and oncoming traffic.

Calculations of the intersection collision rate per MEV for all collision types across the five-year study period showed an intersection collision rate of 0.84/MEV. Based on this analysis, Blair Road/Highway 174 Eastbound Off-Ramp does not experience an abnormally high rate of collisions.

#### *Cadboro Road/Ogilvie Road*

A total of nine collisions were reported at this intersection over the last five years, of which there were seven rear end collisions and two single-vehicle/other collisions. Two of the collisions involved an injury and none involved a fatality. None of the collisions involved cyclists and one collision involved a pedestrian. The collision involving a pedestrian occurred during nighttime conditions with a southbound right turning vehicle.

Of the nine collisions at this location, one of them occurred during rain conditions and one of them occurred during snow conditions, for all other collisions weather was not a factor. Additionally, of the nine collisions, seven of them occurred during daylight hours.

Of the seven rear end collisions, three involved westbound vehicles and four involved eastbound vehicles.

As there are less than six collisions of any specific collision type, there are no identifiable collision patterns at this intersection. Calculations of the intersection collision rate per MEV for all collision types across the five-year study period showed an intersection collision rate of 0.16/MEV. Based on this analysis, Cadboro Road/Ogilvie Road experiences a relatively low rate of collisions.

#### *Ogilvie Road at pedestrian signal 240m west of Blair Road*

A total of six collisions were reported at this intersection over the last five years, all six of which were rear end collisions. Two of the collisions involved an injury and none involved a fatality. None of the collisions involved cyclists and one collision involved a pedestrian.

Of the six collisions at this location, one of them occurred during snow conditions, for all other collisions weather was not a factor. Additionally, all six collisions occurred during daylight hours.

Of the six rear end collisions, one involved southbound vehicles, three involved westbound vehicles and two involved eastbound vehicles.

As there are less than six collisions of any specific collision type, there are no identifiable collision patterns at this intersection. Calculations of the intersection collision rate per MEV for all collision types across the five-year study period showed an intersection collision rate of 0.14/MEV. Based on this analysis, Ogilvie Road at pedestrian signal 240m west of Blair Road experiences a relatively low rate of collisions.

#### *Ogilvie Road/Bathgate Drive/City Park Drive*

A total of 37 collisions were reported at this intersection over the last five years, of which there were one approaching collision, six angle collisions, 10 rear end collisions, five sideswipe collisions, nine turning movement collisions, and six single-vehicle/other collisions. Twelve of the collisions involved an injury and none involved a fatality. None of the collisions involved cyclists and two of the collisions involved a pedestrian. Both collisions involving a pedestrian occurred during daytime conditions with vehicles travelling in the westbound direction.

Of the 37 collisions at this location, two of them occurred during rain conditions, three of them occurred during snow conditions, and one occurred during freezing rain conditions, for all other

collisions weather was not a factor. Additionally, of the 37 collisions, 29 of them occurred during daylight hours.

Of the six angle collisions, two involved northbound and eastbound vehicles, two involved southbound and westbound vehicles, one involved a northbound and westbound vehicle, and one involved a southbound and eastbound vehicle.

Of the ten rear end collisions, one involved northbound vehicles, one involved southbound vehicles, four involved eastbound vehicles, and four involved westbound vehicles.

Of the nine turning movement collisions, seven involved eastbound left turning vehicles, one involved a westbound left turning vehicle, and one involved a southbound left turning vehicle. The eastbound and westbound left turn movements at this intersection currently operate with a protected and permitted left turn phase. It is recommended that the City monitor the collision history for the eastbound left turn movement. Should the collision pattern continue, consideration could be given to implementing fully protected left turn phasing.

Of the six single motor vehicle or other collisions, one involved a northbound vehicle, one involved a southbound vehicle, one involved an eastbound vehicle, and three involved westbound vehicles.

Calculations of the intersection collision rate per MEV for all collision types across the five-year study period showed an intersection collision rate of 0.68/MEV. Based on this analysis, Ogilvie Road/Bathgate Drive/City Park Drive does not experience an abnormally high rate of collisions.

#### Ogilvie Road/City Park Drive/1941 Ogilvie Road

A total of 24 collisions were reported at this intersection over the last five years, of which there were one angle collision, nine rear end collisions, 12 turning movement collisions, and two single-vehicle/other collisions. Eight of the collisions involved an injury and none involved a fatality. None of the collisions involved cyclists and one collision involved a pedestrian. The collision involving a pedestrian occurred during daytime conditions with a westbound vehicle.

Of the 24 collisions at this location, four of them occurred during rain conditions, one occurred during snow conditions, and one of them occurred during fog/mist/smoke/dust conditions, for all other collisions weather was not a factor. Additionally, of the 24 collisions, 19 of them occurred during daylight hours.

Of the nine rear end collisions, one involved northbound vehicles, three involved westbound vehicles and five involved eastbound vehicles.

Of the twelve turning movement collisions, nine involved westbound left turning vehicles, one involved a northbound left turning vehicle, one involved a southbound vehicle performing a U-turn, and one involved an eastbound vehicle performing a U-turn. The eastbound left turn movement at this intersection currently operates with a protected and permitted left turn phasing while the westbound left turn movement operates with a permitted left turn phase. It is recommended that the City monitor the collision history for the westbound left turn movement. Should the collision pattern continue, consideration could be given to implementing a protected and permitted left turn phasing, consistent with the eastbound left turn movement.

Due to the high volume of oncoming eastbound through and westbound left turning vehicles there are perhaps insufficient gaps for westbound vehicles to make safe turning movements at the Ogilvie Road/City Park Drive/1941 Ogilvie Road intersection.

Calculations of the intersection collision rate per MEV for all collision types across the five-year study period showed an intersection collision rate of 0.47/MEV. Based on this analysis, Ogilvie Road/City Park Drive/1941 Ogilvie Road does not experience an abnormally high rate of collisions.

#### Ogilvie Road/Matheson Road/Palmerston Drive

A total of 19 collisions were reported at this intersection over the last five years, of which there were three angle collisions, eight rear end collisions, four turning movement collisions, and four single-vehicle/other collisions. Two of the collisions involved an injury and none involved a fatality. None of the collisions involved cyclists or pedestrians.

Of the 19 collisions at this location, two of them occurred during rain conditions and three occurred during snow conditions, for all other collisions weather was not a factor. Additionally, of the 19 collisions, 14 of them occurred during daylight hours.

Of the eight rear end collisions, one involved southbound vehicles, six involved westbound vehicles and one involved eastbound vehicles. Rear end collisions at the Ogilvie Road/Matheson Road/Palmerston Drive intersection could be attributed to high westbound and eastbound traffic volumes.

Calculations of the intersection collision rate per MEV for all collision types across the five-year study period showed an intersection collision rate of 0.35/MEV. Based on this analysis, Ogilvie Road/Matheson Road/Palmerston Drive experiences a relatively low rate of collisions.

#### Other Intersections and Roadway Segments

As all other intersections and roadway segments have less than six collisions of any specific collision type, a further review of collisions is not required.

## **2.2 Planned Conditions**

### **2.2.1 Planned Transit and Roadway Projects**

The City of Ottawa's 2013 Transportation Master Plan (TMP) identifies the following projects within the study area:

- Blair Road - The 2031 Affordable Transit Network identifies transit signal priority and queue jump lanes between Innes Road and Blair station and exclusive bus lanes and transit signal priority between Blair Station and Montreal Road. Bus lanes are to be provided through a combination of road widening (north of Ogilvie Road) and conversion of existing traffic lanes (south of Ogilvie Road).
- Eastern LRT - The 2031 Affordable Transit Network identifies extension of LRT service following Highway 174 between Blair Station and Place d'Orléans Station. The 2031 Transit Network Concept identifies extension of LRT service following Highway 174 between Place d'Orleans Station and Trim Station. At the time of this writing the extension is scheduled for handover to the City in 2025.
- Ogilvie Road - The 2031 Transit Network Concept identifies transit signal priority between Montreal Road and St. Laurent Boulevard.

- Ottawa Road 174 - The 2031 Road Network Concept identifies widening of the road from four to six lanes between Highway 417 and Trim Road.

The City's 2013 Ottawa Cycling Plan (OCP) identifies the addition of Multi-Use Pathway on City Park Drive as well as the access to Blair Station as part of Phase 2 and bike lanes on Blair Road between Ogilvie Road and Meadowbrook Road as part of Phase 3.

The subject site is located within the Blair Transit Oriented Development (TOD) area. Consistent with the OCP, the Blair TOD Plan recommends improved cycling facilities along City Park Drive and the access to Blair Station. In addition to improved cycling facilities, the Blair TOD Plan recommends new sidewalks within the surrounding community. The proposed pedestrian and bicycle network from the Blair TOD Plan are included in **Appendix F**.

A new east-west Multi-Use pathway (MUP) will be constructed by the City of Ottawa along the rail corridor to the south. A new north-south MUP will also be constructed by the City within a 6m wide parcel along the eastern property line, connecting City Park Drive and the east-west MUP along the rail corridor. The new MUP network will form part of the City's Cross-town bikeway network. The timing for implementation of both pathways is currently unknown.

The Blair Road Transit Priority Environmental Assessment Study (April 2021) shows numerous changes to the Blair Road corridor. Notable changes to the Blair Road/Highway 174 Westbound off-ramp/1980 Ogilvie Road intersection include:

- Protected intersection design;
- Addition of a second westbound through lane;
- Removal of the westbound right turn channel;
- Addition of a new transit only eastbound right turn lane between the left turn lane and right turn lane; and
- Removal of the southbound channelized right turn lane and conversion of the curbside through lane to a through/right turn lane.

Notable changes to the Blair Road/Highway 174 Eastbound off-ramp include:

- Protected intersection design;
- Addition of a second westbound left turn lane;
- Modifications to the westbound right turn channel;
- Conversion of one northbound through lane to a transit only lane; and
- Addition of a southbound left turn lane.

A multi-use pathway will be provided on the west side of Blair Road with dedicated cycling and pedestrian facilities provided on the east side of Blair Road throughout the study area.

The Montreal-Blair Road Transit Priority Corridor Environmental Assessment Study (February 2022) shows numerous changes at the Blair Road/Ogilvie Road intersection, including:

- Protected intersection design;
- Addition of a second northbound through lane; and
- Addition of a new southbound right turn auxiliary lane.

Relevant excerpts from the Blair Road Transit Priority Environmental Assessment and the Montreal-Blair Road Transit Priority Corridor Environmental Assessment are included in **Appendix G**.

### 2.2.2 Other Area Developments

Other developments in the area include:

- Shoppers City East Redevelopment (1405 Blair Towers) – Proposed mixed-use development including retail, coffee shop, warehouse membership club store, and an 18-position gas-bar land uses to be developed in two phases. A TIS dated May 2016 was prepared in support of Phase 2. Full buildout was expected in 2017 and it is currently fully occupied.
- 2280 City Park Drive Residential Development – Proposed mixed-use development including residential, retail, and commercial land uses to be developed in five phases. A TIA dated August 2018 was prepared in support of Phase 2 and a TIA dated January 2019 was prepared in support of Phases 3-5. Build-out of all five phases is anticipated to occur in 2030.
- 1980 Ogilvie Road – Proposed mixed-use development including residential, office, and ground floor retail land uses to be developed in 4 stages. A TIA dated September 2019 was prepared in support of Stage 1. Stage 1 was anticipated to be built out in 2020.

Excerpts from relevant transportation studies have been attached in **Appendix H**.

### 2.3 Study Area and Time Periods

The study area for this report includes the boundary roadway City Park Drive as well as the following intersections:

- Ogilvie Road/Matheson Road/Palmerston Drive
- Ogilvie Road/Cadboro Road
- Ogilvie Road/City Park Drive/Bathgate Drive
- Ogilvie Road/1900 Ogilvie Road
- Ogilvie Road/City Park Drive
- Ogilvie Road/1980 Ogilvie Road (Intersection Pedestrian Signal)
- Ogilvie Road/Blair Road
- 174 Westbound off-ramp/Blair Road
- 174 Eastbound off-ramp/Blair Road

The selected time periods for the analysis are the weekday AM and PM peak hours, as they represent the ‘worst case’ combination of site generated traffic and adjacent street traffic. Analysis will be completed for the ultimate build-out year of 2037. Due to the extended buildout period, a five-year horizon will not be completed. A further review of traffic operations will be provided as each phase proceeds to the Site Plan Control application stage.

### 2.4 Exemptions Review

This module reviews possible exemptions from the final Transportation Impact Assessment, as outlined in the *2017 TIA Guidelines*. The applicable exemptions for this site are shown in **Table 4**.

Table 4: TIA Exemptions

| Module                                               | Element                             | Exemption Criteria                                                                                                                                                                  | Status     |
|------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Design Review Component</b>                       |                                     |                                                                                                                                                                                     |            |
| <b>4.1</b><br>Development<br>Design                  | 4.1.2<br>Circulation and<br>Access  | • Only required for site plans                                                                                                                                                      | Exempt     |
|                                                      | 4.1.3<br>New Street<br>Networks     | • Only required for plans of subdivision                                                                                                                                            | Exempt     |
| <b>4.2</b><br>Parking                                | 4.2.1<br>Parking<br>Supply          | • Only required for site plans                                                                                                                                                      | Exempt     |
|                                                      | 4.2.2<br>Spillover<br>Parking       | • Only required for site plans where parking<br>supply is 15% below unconstrained demand                                                                                            | Exempt     |
| <b>Network Impact Component</b>                      |                                     |                                                                                                                                                                                     |            |
| <b>4.5</b><br>Transportation<br>Demand<br>Management | <i>All elements</i>                 | • Not required for non-residential site plans<br>expected to have fewer than 60 employees<br>and/or students on location at any given time                                          | Not Exempt |
| <b>4.6</b><br>Neighbourhood<br>Traffic<br>Management | 4.6.1<br>Adjacent<br>Neighbourhoods | • Only required when the development relies on<br>local or collector streets for access and total<br>volumes exceed ATM capacity thresholds                                         | Not Exempt |
| <b>4.8</b><br>Network<br>Concept                     | <i>All elements</i>                 | • Only required when proposed development<br>generates more than 200 person-trips during<br>the peak hour in excess of the equivalent<br>volume permitted by the established zoning | Not Exempt |

As this TIA has been prepared in support of Zoning By-law Amendment and Official Plan Amendment applications, the Design Review components (Modules 4.1 to 4.4) are exempt from the analysis. A detailed review of Modules 4.1 to 4.4 will be conducted as part of the future Site Plan Control application.

### 3.0 FORECASTING

#### 3.1 Development-Generated Travel Demand

##### 3.1.1 Trip Generation

The proposed development is anticipated to include a maximum of 1,192 residential units within five buildings. Trips generated by the proposed development have been estimated using the *2020 TRANS Trip Generation Manual*. The trip generation rates are taken from Table 3 and correspond to High-Rise Residential. The directional split between inbound and outbound trips are based on the blended splits presented in Table 9 of the report.

The estimated trip generation are summarized in **Table 5**.

**Table 5: Person Trips Generated by Proposed Development**

| Land Use                                   | TRANS Rate           | Units | AM Peak (ppp) <sup>(1)</sup> |     |     | PM Peak (ppp) <sup>(1)</sup> |     |      |
|--------------------------------------------|----------------------|-------|------------------------------|-----|-----|------------------------------|-----|------|
|                                            |                      |       | IN                           | OUT | TOT | IN                           | OUT | TOT  |
| High-Rise Residential,<br>Beacon Hill Area | AM: 0.80<br>PM: 0.90 | 1,192 | 296                          | 658 | 954 | 622                          | 451 | 1073 |

1. ppp: person trips per period

The 2020 TRANS Trip Generation Manual provides modal shares for residential developments within the Beacon Hill Area. However, developments within 600m of rapid transit stations can be considered as Transit Oriented Developments (TOD). In TOD zones, the transit share is assumed to increase significantly compared to any TRANS O-D District. A summary of the TRANS residential mode shares (average of AM and PM peak, rounded to nearest 5%), TOD mode shares, and assumed residential mode shares is provided in **Table 6**.

**Table 6: TRANS and TOD Mode Share Comparison (Residential)**

|                 | Auto Driver | Auto Passenger | Transit    | Cycling   | Walking    |
|-----------------|-------------|----------------|------------|-----------|------------|
| TRANS           | 50%         | 15%            | 30%        | 0%        | 5%         |
| TOD             | 15%         | 5%             | 65%        | 5%        | 10%        |
| <b>Proposed</b> | <b>25%</b>  | <b>10%</b>     | <b>50%</b> | <b>5%</b> | <b>10%</b> |

Using the trips generated in **Table 5** and the proposed mode share from **Table 6** trips generated during the peak period were broken down by modal share in **Table 7**. After breaking down the trips by modal shares in **Table 7** adjustment factors were applied to convert the peak period trips to peak hour trips in **Table 8**.

**Table 7: Proposed Peak Period Person Trips by Mode**

| Travel Mode    | Mode Share | AM Peak (ppp) <sup>(1)</sup> |     |     | PM Peak (ppp) <sup>(1)</sup> |     |      |
|----------------|------------|------------------------------|-----|-----|------------------------------|-----|------|
|                |            | IN                           | OUT | TOT | IN                           | OUT | TOT  |
| TOTAL          |            | 296                          | 658 | 954 | 622                          | 451 | 1073 |
| Auto Driver    | 25%        | 74                           | 164 | 238 | 156                          | 113 | 269  |
| Auto Passenger | 10%        | 30                           | 66  | 96  | 62                           | 45  | 107  |
| Transit        | 50%        | 148                          | 329 | 477 | 311                          | 225 | 536  |
| Cyclist        | 5%         | 15                           | 33  | 48  | 31                           | 23  | 54   |
| Pedestrian     | 10%        | 29                           | 66  | 95  | 62                           | 45  | 107  |

1. ppp: person trips per period

Table 4 of the 2020 TRANS Trip Generation Manual includes adjustment factors to convert the estimated number of trips generated for each mode from peak period to peak hour. A breakdown of the peak hour trips by mode is shown in **Table 8**.

**Table 8: Proposed Peak Hour Person Trips by Mode**

| Travel Mode    | Adjustment Factor |      | AM Peak (pph) <sup>(1)</sup> |            |            | PM Peak (pph) <sup>(1)</sup> |            |            |
|----------------|-------------------|------|------------------------------|------------|------------|------------------------------|------------|------------|
|                | AM                | PM   | IN                           | OUT        | TOT        | IN                           | OUT        | TOT        |
| <b>TOTAL</b>   |                   |      | <b>157</b>                   | <b>349</b> | <b>505</b> | <b>289</b>                   | <b>210</b> | <b>499</b> |
| Auto Driver    | 0.48              | 0.44 | 35                           | 79         | 114        | 68                           | 50         | 118        |
| Auto Passenger | 0.48              | 0.44 | 14                           | 32         | 46         | 27                           | 20         | 47         |
| Transit        | 0.55              | 0.47 | 81                           | 181        | 262        | 146                          | 106        | 252        |
| Cyclist        | 0.58              | 0.48 | 9                            | 19         | 28         | 15                           | 11         | 26         |
| Pedestrian     | 0.58              | 0.52 | 17                           | 38         | 55         | 33                           | 23         | 56         |

1. pph: person trips per hour

From the previous table, the proposed development is projected to generate 505 person trips (including 114 vehicle trips) during the AM peak hour and 499 person trips (including 118 vehicle trips) during the PM peak hour. The previous concept plan generated 135 AM peak hour two-way vehicle trips and 143 PM peak hour two-way vehicle trips. This represents a decrease of 21 AM and 25 PM peak hour two-way vehicle trips. Compared to the previous concept plan, the proposed development results in a net reduction in person and vehicle trips.

### 3.1.2 Trip Distribution

The assumed distribution of trips generated by the proposed development has been derived from existing commuter traffic patterns within the study area as well as a review of existing traffic movements exiting the study area during the AM peak hour and entering the study area during the PM peak hour. The anticipated trip distribution is:

- 30% to/from the west via Highway 174
- 25% to/from the west via Ogilvie Road
- 15% to/from the north via Blair Road
- 10% to/from the south via Blair Road
- 10% to/from the east via Ogilvie Road
- 10% to/from the east via Highway 174

### 3.1.3 Trip Assignment

All traffic generated by this development is expected to access Ogilvie Road at either of two City Park Drive intersections. Traffic travelling to/from the west along Ogilvie Road is expected to access Ogilvie Road at the Ogilvie Road/Bathgate Drive/City Park Drive west intersection. Traffic travelling to/from the east along Ogilvie Road, along Blair Road, or on Highway 174 are expected to access Ogilvie Road at the Ogilvie Road/1941 Ogilvie Road/City Park Drive east intersection.

Although there is potential for cut through traffic utilizing the private roadway associated with 1980 Ogilvie Road near Blair Station to travel to and from Blair Road, traffic has not been assigned to this private roadway. Due to the presence of traffic calming measures within the 1980 Ogilvie Road site as well as high volumes of pedestrians and cyclists in the vicinity of Blair Station, trips generated by the subject site have been assigned to the adjacent public roadways during peak hours.

## 3.2 Background Traffic

### 3.2.1 Other Area Development

A review of other area development traffic has been conducted, per the developments listed in Section 2.2.2. Traffic generated by these developments have been considered in this analysis and added to the future background traffic volumes, as the development was completed after the most recent available traffic data. Relevant excerpts of the traffic study associated with the development below are included in **Appendix H**.

#### Shoppers City East Redevelopment (1405 Blair Towers)

The proposed mixed-use development is expected to generate 771 and 1072 vehicle trips during the AM and PM peak hours, respectively. Construction was completed in 2020.

### 2280 City Park Drive Residential Development

Phase 2 of the proposed residential development is expected to generate 41 and 43 vehicle trips during the AM and PM peak hours, respectively. Phases 3, 4, and 5 of the proposed residential development is expected to generate an additional 54 and 64 vehicle trips during the AM and PM peak hours, respectively. Construction of phase 2 was recently completed. Full build-out of the site is expected to be complete by 2030.

### 1980 Ogilvie Road

The proposed residential development is expected to generate 54 and 76 vehicle trips during the AM and PM peak hours, respectively. Full build-out of the site was expected by 2020 but the construction has not commenced.

## **3.2.2 General Background Growth Rate**

A review has been conducted of snapshots of the City's *Strategic Long-Range Model*, which are included in **Appendix I**. Comparing snapshots of the 2011 and 2031 AM peak hour traffic volumes, showed growth rates between 0.1%-0.5% along Ogilvie Road, 0.2%-2% along Blair Road, and 0.7%-1.2% at the Highway 174 off-ramps. A background growth rate of 1% is assumed for Ogilvie Road, Blair Road, and Highway 174. This is consistent with other approved transportation studies in the study area that were completed in recent years.

## **3.3 Future Traffic Conditions**

The figures listed below present the following future traffic conditions:

- Proposed site-generated traffic volumes in 2037 are shown in **Figure 4**;
- Background traffic volumes in 2037 are shown in **Figure 5**;
- Total traffic volumes in 2037 are shown in **Figure 6**;

## **3.4 Demand Rationalization**

A review of the existing and background intersection operations has been conducted to determine if and when traffic volumes exceed capacity within the study area. The intersection parameters used in the analysis are consistent with the *2017 TIA Guidelines* (Saturated Flow Rate: 1,800 vphpl, Peak Hour Factor: 0.9 in existing conditions and 1.0 in future conditions).

Per Exhibit 22 of the *Multi-Modal Level of Service (MMLOS) Guidelines* (produced by IBI Group in October 2015), the target vehicular level of service (Auto LOS) for an arterial or collector road within 600m of a rapid transit station is an Auto LOS E, which equates to a vehicle-to-capacity (v/c) ratio of 1.0 or better at signalized intersections. This target applies to the following study area intersections: Ogilvie Road/1900 Ogilvie Road/1929 Ogilvie Road, Ogilvie Road/City Park Drive East/1941 Ogilvie Road, Blair Road/Ogilvie Road, Blair Road/1980 Ogilvie Road/HWY 174 WB Off-Ramp, and Blair Road/HWY 174 EB.

All other study area intersections are located in a 'General Urban Area' and have a target Auto LOS D, which equates to a vehicle-to-capacity (v/c) ratio of 0.9 or better at signalized intersections.

Signal timing plans were obtained from the City, and are included in **Appendix J**.

Figure 4: Site-Generated Volumes

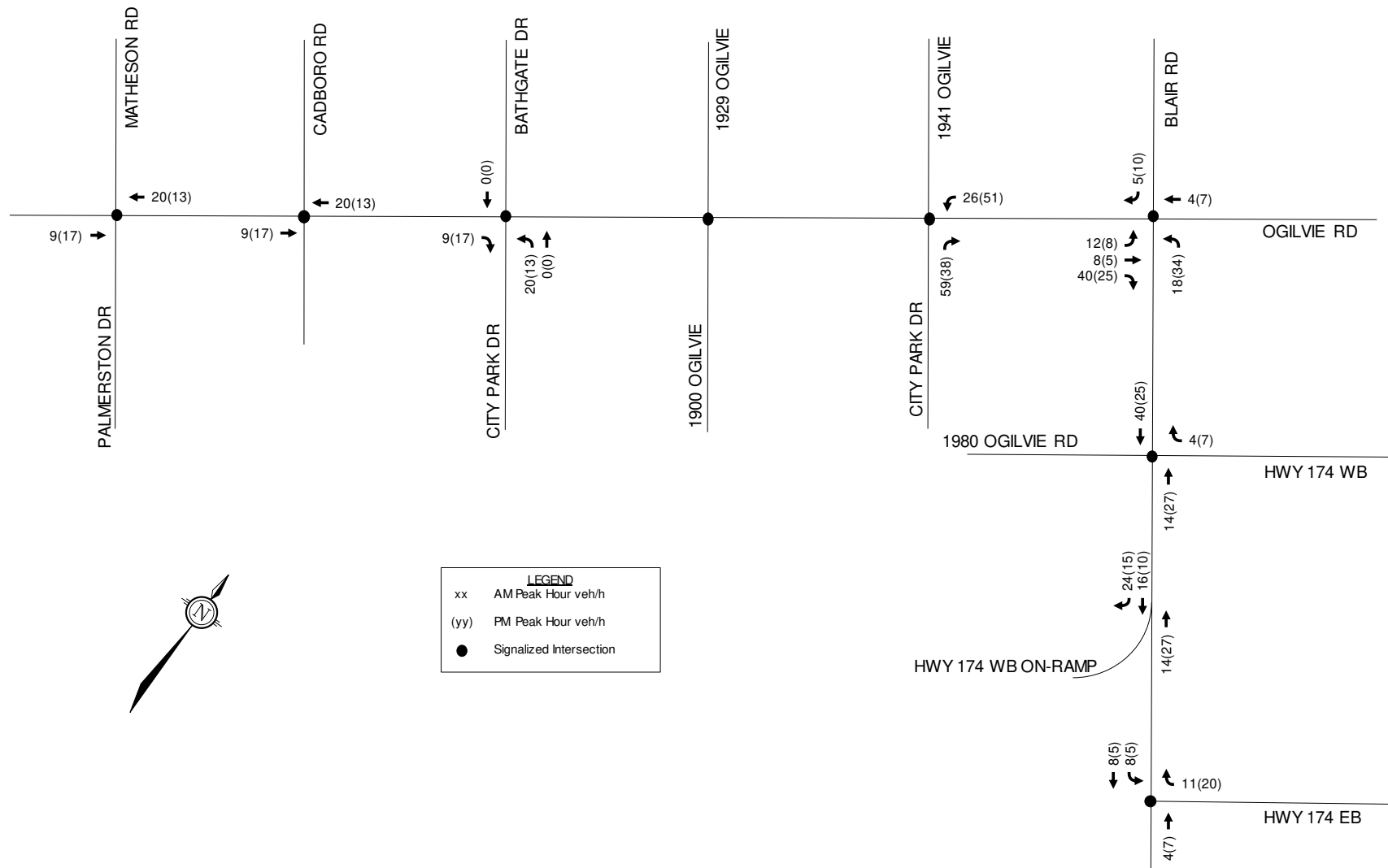


Figure 5: 2037 Background Traffic

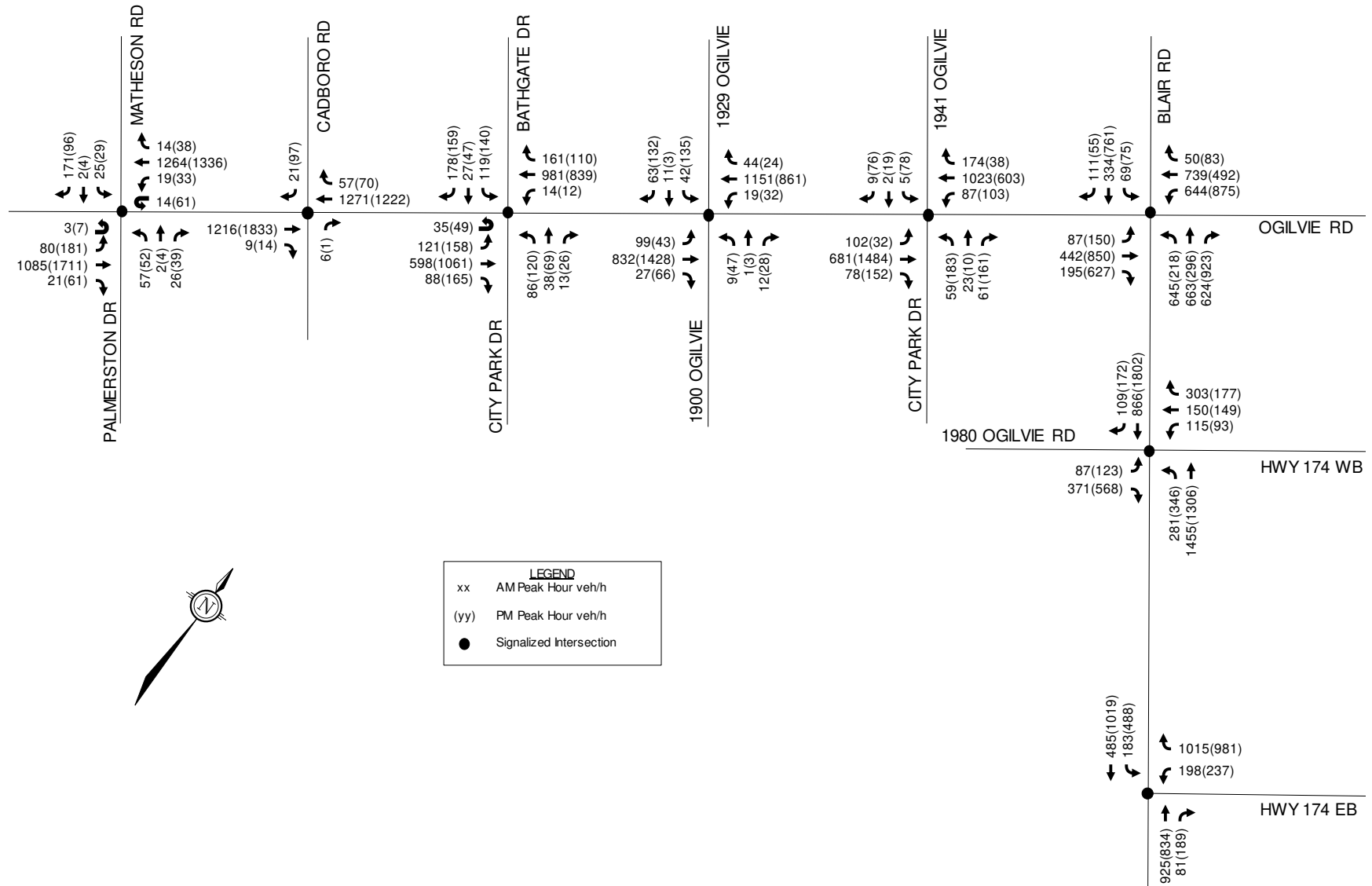
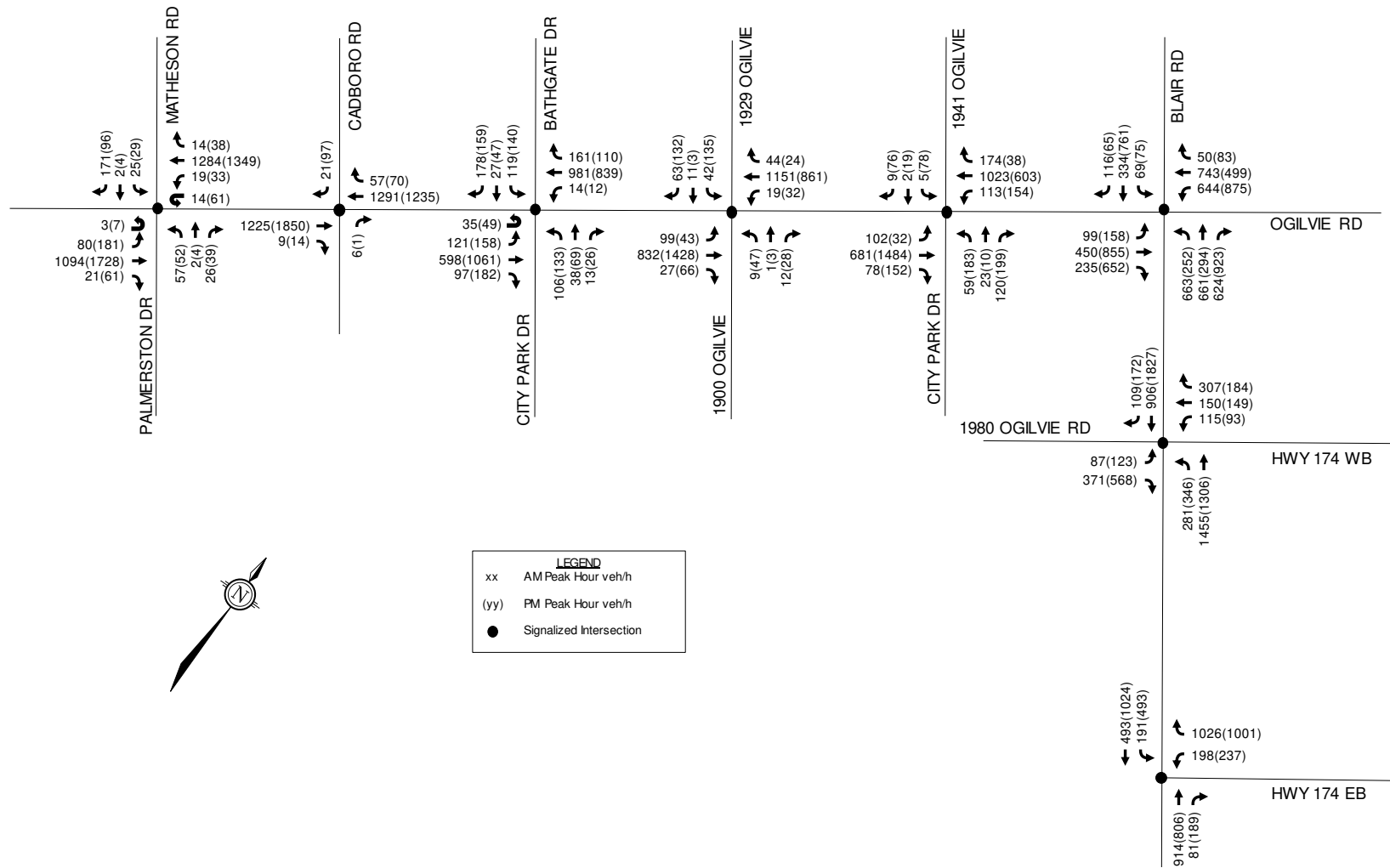


Figure 6: 2037 Total Traffic



### 3.4.1 Existing Intersection Operations

Intersection capacity analysis has been conducted for the existing traffic conditions. The results of the analysis are summarized in **Table 9** for the weekday AM and PM peak hours. Detailed reports are included in **Appendix K**.

**Table 9: Existing Traffic Operations**

| Intersection                                | AM Peak |     |            | PM Peak     |          |            |
|---------------------------------------------|---------|-----|------------|-------------|----------|------------|
|                                             | V/C     | LOS | Mvmt       | V/C         | LOS      | Mvmt       |
| Ogilvie Road/Matheson Road/Palmerston Drive | 0.56    | A   | WBT/R      | 0.75        | C        | EBT/R      |
| Ogilvie Road/Cadboro Road                   | 0.47    | A   | WBT/R      | 0.70        | B        | EBT/R      |
| Ogilvie Road/City Park Drive/Bathgate Drive | 0.65    | B   | SBL        | 0.72        | C        | NBL        |
| Ogilvie Road/1900 Ogilvie Road              | 0.48    | A   | WBT/R      | 0.60        | A        | EBT        |
| Ogilvie Road/City Park Drive                | 0.42    | A   | WBT        | 0.83        | D        | EBT        |
| Ogilvie Road/Blair Road                     | 0.97    | E   | NBT        | <b>1.04</b> | <b>F</b> | <b>EBR</b> |
| HWY 174 Westbound off-ramp/Blair Road       | 0.70    | B   | WBR<br>NBT | 0.89        | D        | EBR        |
| HWY 174 Eastbound off-ramp/Blair Road       | 0.66    | B   | WBR        | 0.92        | E        | SBT/L      |

Under existing traffic conditions, there is one failing movement at the Ogilvie Road/Blair Road intersection during the PM peak hour. All other intersections meet the target Auto LOS of E within 600m of Blair Station and the target Auto LOS of D elsewhere.

During the PM peak hour, the eastbound right turn lane on Ogilvie Road at Blair Road operates with a LOS F and a v/c ratio of 1.04. To achieve the target LOS E at this intersection, a reduction of 22 eastbound right turning vehicles is required. The reduction in eastbound right turning vehicles can be achieved by increased use of non-auto modes of transportation, alternative travel times (peak period spreading), and alternative routes of travel. A further description of each option is provided in the subsequent sections.

### 3.4.2 2037 Background Traffic Conditions

Intersection capacity analysis has been conducted for the 2037 background traffic conditions and are summarized in **Tables 10** and **11**. Detailed reports are included in **Appendix K**.

**Table 10: 2037 Background Traffic Operations**

| Intersection                                | AM Peak      |          |            | PM Peak      |          |            |
|---------------------------------------------|--------------|----------|------------|--------------|----------|------------|
|                                             | Delay or V/C | LOS      | Mvmt       | Delay or V/C | LOS      | Mvmt       |
| Ogilvie Road/Matheson Road/Palmerston Drive | 0.60         | A        | WBT/R      | 0.80         | C        | EBT/R      |
| Ogilvie Road/Cadboro Road                   | 0.50         | A        | WBT/R      | 0.73         | C        | EBT/R      |
| Ogilvie Road/City Park Drive/Bathgate Drive | 0.60         | A        | WBT<br>SBL | 0.66         | B        | NBL        |
| Ogilvie Road/1900 Ogilvie Road              | 0.51         | A        | WBT/R      | 0.65         | B        | EBT        |
| Ogilvie Road/City Park Drive                | 0.44         | A        | WBT        | 0.85         | D        | EBT        |
| Ogilvie Road/Blair Road                     | <b>1.30</b>  | <b>F</b> | <b>WBL</b> | <b>1.27</b>  | <b>F</b> | <b>NBR</b> |

| Intersection                          | AM Peak      |          |            | PM Peak      |          |            |
|---------------------------------------|--------------|----------|------------|--------------|----------|------------|
|                                       | Delay or V/C | LOS      | Mvmt       | Delay or V/C | LOS      | Mvmt       |
|                                       | <b>1.02</b>  | <b>F</b> | <b>NBT</b> | <b>1.25</b>  | <b>F</b> | <b>WBL</b> |
|                                       |              |          |            | <b>1.17</b>  | <b>F</b> | <b>EBR</b> |
|                                       |              |          |            | <b>1.03</b>  | <b>F</b> | <b>EBT</b> |
| HWY 174 Westbound off-ramp/Blair Road | 0.72         | C        | NBT        | 0.89         | D        | EBR        |
| HWY 174 Eastbound off-ramp/Blair Road | 0.69         | B        | WBR        | 0.98         | E        | SBT/L      |

Table 11: 2037 Background Queues

| Intersection            | Mvmt  | Storage/ Spacing <sup>(1)</sup> | AM Peak         |                              |                              | PM Peak         |                              |                              |
|-------------------------|-------|---------------------------------|-----------------|------------------------------|------------------------------|-----------------|------------------------------|------------------------------|
|                         |       |                                 | v/c [LOS]       | 50 <sup>th</sup> % Queue (m) | 95 <sup>th</sup> % Queue (m) | v/c [LOS]       | 50 <sup>th</sup> % Queue (m) | 95 <sup>th</sup> % Queue (m) |
| Ogilvie Road/Blair Road | NBL   | 120m                            | 0.95 [E]        | 91                           | #127                         | 0.70 [B]        | 30                           | 44                           |
|                         | NBT   | 220m                            | <b>1.02 [F]</b> | ~194                         | <b>#267</b>                  | 0.62 [B]        | 73                           | 107                          |
|                         | NBR   | 200m                            | 0.76 [C]        | 51                           | 103                          | <b>1.27 [F]</b> | ~227                         | <b>#310</b>                  |
|                         | SBL   | 30m                             | 0.70 [B]        | 19                           | #42                          | 0.56 [A]        | 20                           | 36                           |
|                         | SBT/R | 100m                            | 0.62 [B]        | 55                           | 74                           | 0.97 [E]        | ~119                         | #164                         |
|                         | EBL   | 70m                             | 0.58 [A]        | 24                           | 40                           | 0.77 [C]        | 40                           | #68                          |
|                         | EBT   | 230m                            | 0.57 [A]        | 57                           | 75                           | <b>1.03 [F]</b> | ~132                         | <b>#173</b>                  |
|                         | EBR   | 230m                            | 0.39 [A]        | 0                            | 19                           | <b>1.17 [F]</b> | ~157                         | <b>#230</b>                  |
|                         | WBL   | 110m                            | <b>1.30 [F]</b> | ~118                         | <b>#155</b>                  | <b>1.25 [F]</b> | ~155                         | <b>#195</b>                  |
|                         | WBT/R | 225m                            | 0.81 [D]        | 106                          | #149                         | 0.51 [A]        | 66                           | 85                           |

1. Indicates the storage length for auxiliary lanes or the spacing to the nearest upstream intersection for through lanes

#: volume for the 95<sup>th</sup> percentile cycle exceeds capacity

~: approach is above capacity

The westbound left turning movement and northbound through movements at the Ogilvie Road/Blair Road intersection do not meet the target LOS E during the AM peak hour and the northbound right, westbound left, eastbound right and eastbound through movements do not meet the target LOS E in the PM peak hour. All other intersections within the study area are expected to meet the City's target. A summary of the critical queueing at the study area intersections is provided below.

During the AM peak hour at the Ogilvie Road/Blair Road intersection, the average and maximum queue lengths of the westbound left movement exceed the current storage capacity. Additionally, the maximum queue lengths of the northbound left, the northbound through, and the southbound left turn movements exceed the existing storage capacity.

During the PM peak hour at the Ogilvie Road/Blair Road intersection, the average and maximum queue lengths of the northbound right, the southbound through/right, and the westbound left movements and the maximum queue length for the southbound left turn movement exceed the existing storage length.

The approximate required reduction in volumes to meet the target Auto LOS for each over-capacity movement is included below.

#### AM Peak Hour

- Ogilvie Road/Blair Road
  - Westbound left turn (v/c: 1.30): reduction of 148 vehicles required;
  - Northbound through (v/c: 1.02): reduction of 9 vehicles required.

### PM Peak Hour

- Ogilvie Road/Blair Road
  - Northbound right turn (v/c: 1.27): reduction of 192 vehicles required;
  - Westbound left turn (v/c: 1.25): reduction of 170 vehicles required;
  - Eastbound right turn (v/c: 1.17): reduction of 88 vehicles required;
  - Eastbound through (v/c: 1.03): reduction of 22 vehicles required.

Traffic throughout the study area could be displaced or alleviated through a combination of increased use of non-auto modes of transportation, alternate time to travel for drivers using the study area roadways to make use of off-peak capacity, and alternate routes for travel. A further description of each option is provided below.

### Increased Use of Non-Auto Modes

As stated in Section 2.2.1 exclusive bus lanes and transit signal priority along Blair Road and the Eastern LRT extension to Trim Road are anticipated to be constructed prior to the 2037 build-out year. The transit network concept also includes transit signal priority and queue jump lanes along Ogilvie Road. These transit projects are anticipated to increase the transit modal share and decrease the auto modal share, thereby reducing traffic volumes within the study area.

Additionally, the new east-west MUP will be constructed by the City of Ottawa along the rail corridor to the south and will form part of the City's Cross-town bikeway network. This project is expected to increase the active modal shares and decrease the auto modal share, thereby reducing traffic volumes within the study area.

### Alternate Travel Times

As congestion increases within the study area, some motorists may alter their travel to occur outside of the peak hours. This shift in travel times may result in a reduction of peak hour traffic volumes.

### Alternate Routes of Travel

As congestion increases within the study area, some motorists may choose alternate routes of travel outside the study area. Other alternative east-west routes outside of the study area include Highway 174, Montreal Road, and Aviation Parkway.

## **4.0 ANALYSIS**

### **4.1 Development Design**

The proposed development is anticipated to include one new vehicular access to City Park Drive and one shared access with the adjacent office building at 1900 City Park Drive. Pedestrian connections are anticipated to be provided to the MUP's east and south of the site, as well as to the sidewalks along City Park Drive.

### **4.2 Parking**

A detailed review of Module 4.2 will be conducted as part of the future Site Plan Control application.

### **4.3 Boundary Streets**

A detailed review of Module 4.3 will be conducted as part of the future Site Plan Control application.

#### 4.4 Access Intersections

A detailed review of Module 4.4 will be conducted as part of the future Site Plan Control application.

#### 4.5 Transportation Demand Management

##### 4.5.1 Context for TDM

The proposed development is anticipated to include a maximum of 1,192 residential units within five buildings. The unit type breakdown will be provided as part of the future Site Plan Control applications.

##### 4.5.2 Need and Opportunity

As first discussed in Section 3.1.1, the mode share targets for the proposed development are a blended rate based on the observed mode shares for the Beacon Hill region, as outlined in the *TRANS Trip Generation Manual* and mode shares typically seen within a Transit Oriented Development zone.

Failure to meet the proposed mode share is not anticipated, due to the proximity of the subject site to large commercial developments and employment generators as well as planned active transportation projects and rapid transit projects in the area. To improve the use of non-auto modes for the proposed development, Transportation Demand Management (TDM) measures will be considered on a phase by phase basis as part of future Site Plan Control applications.

##### 4.5.3 TDM Program

A review of the City's *TDM Measures Checklist* has been conducted to outline TDM measures that will be considered as part of future Site Plan Control applications. TDM measures include:

- Display local area maps with walking/cycling access routes and key destinations at major entrances;
- Display relevant transit schedules and route maps at entrances;
- Unbundle parking from purchase cost (condo) or monthly rent (apartment);
- Provide multi-modal travel information package to new residents.

#### 4.6 Neighbourhood Traffic Management

The *2017 TIA Guidelines* identify two-way peak hour traffic volume thresholds for considering when a Neighbourhood Traffic Management (NTM) plan should be developed. The NTM two-way volume thresholds are as follows:

- Local Roadways: 120 vehicles during the peak hour, or 1,000 vehicles per day;
- Collector Roadways: 300 vehicles during the peak hour, or 2,500 vehicles per day;
- Major Collector Roadways: 600 vehicles during the peak hour, or 5,000 vehicles per day.

The proposed development will rely on the collector road City Park Drive for direct access. Based on the 2023 existing traffic conditions presented in **Figure 3**, two-way traffic volumes on the City Park Drive leg of the Ogilvie Road/Bathgate Drive/City Park Drive intersection is 247 in the AM peak hour and 419 in the PM peak hour and on the City Park Drive leg of the Ogilvie Road/1941 Ogilvie

Road/City Park Drive intersection the traffic volumes are 299 in the AM peak hour and 613 in the PM peak hour. Traffic generated by the proposed development is anticipated to increase traffic along City Park Drive at Ogilvie Road/Bathgate Drive by 29-30 vehicles, or one vehicle every two minutes during peak hours. Traffic along City Park Drive at Ogilvie Road/1941 Ogilvie Road is anticipated to increase by 85-89 vehicles, or one to two vehicles a minute during peak hours.

Traffic volumes currently show that City Park Drive currently operates as a Major Collector Roadway according to the *NTM thresholds*. These high volumes can largely be attributed to the commercial developments along City Park Drive closer to Ogilvie Road. Since City Park Drive is expected to have lower volumes close to the subject site, no neighbourhood traffic management measures have been recommended as part of this proposed development.

#### 4.7 Transit

Based on the trip generation estimates presented in Section 3.1.1, the proposed development is anticipated to generate the following number of transit trips:

- AM Peak Hour: 262 transit trips, including 181 boarding and 81 alighting;
- PM Peak Hour: 252 transit trips, including 106 boarding and 146 alighting.

The distribution of transit trips to/from the development has been estimated based on origin-destination data from the *TRANS O-D Survey Report*. The destinations of trips from the Beacon Hill district to all TRANS O-D districts during the AM peak period were used to develop the following transit distribution:

- 15% to/from the north via Routes 12, 23, and 24;
- 10% to/from the south via Routes 26, 42, 222, and 228;
- 20% to/from the east via Routes 21, 25, 30, 32, 33, 35, 38, 39, 221, 226, 234, and 237;
- 55% to/from the west via Route 1 and 15

Trips to/from the north are anticipated to be served by a combination of routes 12, 23, and 24. Trip distribution between these routes are anticipated to be roughly equal due to all routes serving slightly different areas and have similar headway times between busses. During the AM peak hour roughly 2-5 people would board each bus and roughly 1-3 people would alight from each bus. During the PM peak hour roughly 1-2 people would board each bus and roughly 2-4 people would alight from each bus. The net additional people added to each bus is not anticipated to impact the capacity of any bus heading to/from the north.

Trips to/from the south are anticipated to be served by a combination of routes 26, 42, 222, and 228. Trip distribution between these routes are anticipated to be roughly equal due to all routes serving slightly different areas and all routes having headway times between busses of roughly 30 minutes. During the AM peak hour roughly 2 people would board each bus and roughly 1 person would alight from each bus. During the PM hour peak hour roughly 1 person would board each bus and roughly 2 people would alight from each bus. The net additional people added to each bus is not anticipated to impact the capacity of any bus heading to/from the south.

Trips to/from the east are anticipated to be served by a combination of routes 21, 25, 30, 32, 33, 35, 38, 39, 221, 226, 234, and 237. Trip distribution between these routes is anticipated to be roughly equal due to all routes serving slightly different areas and all routes have similar headway times between busses. During the AM peak hour roughly 1-3 people would board each bus and

roughly 1 person would alight from each bus. During the PM hour peak hour roughly 1-2 people would board each bus and roughly 1-2 people would alight from each bus. The net additional people added to each bus is not anticipated to impact the capacity of any bus heading to/from the east.

Trips to/from the west are anticipated to be served by a combination of routes 1 and 15. Route 1 has a 5-minute headway and Route 15 has a 15-minute headway. Route 1 is preferable to Route 15 when the final destination is similar due to estimated travel time. Therefore, it is assumed that 80% of trips travelling west will use Route 1.

On Route 1 during the AM peak hour roughly 7 people would board each train and roughly 3 people would alight from each train. During the PM peak hour roughly 4 people would board each train and roughly 5 people would alight from each train. The net additional people added to each train is not anticipated to impact the capacity of any train heading to/from the west.

On Route 15 during the AM peak hour roughly 5 people would board each bus and roughly 2 people would alight from each bus. During the PM peak hour roughly 3 people would board each bus and roughly 4 people would alight from each bus. The net additional people added to each bus is not anticipated to impact the capacity of any bus heading to/from the west.

Based on the foregoing, the proposed development at ultimate buildout is not anticipated to have a significant impact on the existing operations of OC Transpo route.

As Bus Stop #4447 is located over 200m from the nearest pedestrian crossing along City Park Drive and expected to handle a significant amount of transit users from the subject site, volumes were studied to determine if a pedestrian crossover is warranted. Based on the previous analysis the number of pedestrian crossing the road at this location was estimated and shown in the following table.

**Table 12: Crossing Volumes at Stop #4447**

| Route        | AM Peak   |           | PM Peak   |           |
|--------------|-----------|-----------|-----------|-----------|
|              | Boarding  | Alighting | Boarding  | Alighting |
| 15           | 20        | -         | 12        | -         |
| 25           | -         | 1         | -         | 1         |
| 39           | -         | 1         | -         | 1         |
| <b>TOTAL</b> | <b>20</b> | <b>2</b>  | <b>12</b> | <b>2</b>  |

Based on the above table a total of 14-22 people are anticipated to cross the street to Stop #4447 during the peak hours. As the existing transit stop is considered a desire line for pedestrians from the proposed development, consideration should be given to providing a pedestrian crossover along City Park Drive as the development advances. The timing for implementation of a future pedestrian crossover will be reviewed on a phase-by-phase basis through future Site Plan Control applications.

#### 4.8 Network Concept

A review of the future lane capacities at the boundaries of the study area has been conducted to determine if additional capacity is required. The directional capacities for each roadway have been estimated based on typical roadway characteristics and lane capacities used in the City's TRANS Long-Range Transportation Model. For the purposes of this analysis, the lane capacity of Ogilvie Road and Blair Road at both ends of the study area is considered to be 1,000 vphpl.

A summary of the lane capacity analysis for the 2037 background traffic conditions is included in **Table 13**.

**Table 13: Network Lane Capacity Analysis – 2037 Background Traffic**

| Roadway                           | Directional Capacity (vph) | Traffic Volume AM (PM) | v/c Ratio AM (PM) | Auto LOS AM (PM) | Deficiency to Auto LOS 'F' <sup>1</sup> AM (PM) |
|-----------------------------------|----------------------------|------------------------|-------------------|------------------|-------------------------------------------------|
| Blair Rd, north of Ogilvie Rd     |                            |                        |                   |                  |                                                 |
| Northbound                        | 1,000                      | 800 (529)              | 0.80 (0.53)       | C (A)            | -                                               |
| Southbound                        | 1,000                      | 514 (891)              | 0.51 (0.89)       | A (D)            | -                                               |
| Blair Rd, south of Highway 174    |                            |                        |                   |                  |                                                 |
| Northbound                        | 2,000                      | 1,006 (1,023)          | 0.50 (0.51)       | A (A)            | -                                               |
| Southbound                        | 2,000                      | 683 (1,256)            | 0.34 (0.63)       | A (B)            | -                                               |
| Ogilvie Rd, east of Blair Rd      |                            |                        |                   |                  |                                                 |
| Eastbound                         | 2,000                      | 1,135 (1,848)          | 0.57 (0.92)       | A (E)            | -                                               |
| Westbound                         | 2,000                      | 1,433 (1,450)          | 0.72 (0.73)       | C (C)            | -                                               |
| Ogilvie Rd, west of Palmerston Dr |                            |                        |                   |                  |                                                 |
| Eastbound                         | 2,000                      | 1,189 (1,960)          | 0.59 (0.98)       | A (E)            | -                                               |
| Westbound                         | 2,000                      | 1,495 (1,491)          | 0.75 (0.75)       | C (C)            | -                                               |

1: Target LOS F within 600m of Rapid Transit Station

Peak directional traffic along all roadways are anticipated to meet the target LOS E under the 2037 background traffic conditions.

A summary of the lane capacity analysis for the 2037 total traffic conditions is included in **Table 14**.

**Table 14: Network Lane Capacity Analysis – 2037 Total Traffic**

| Roadway                           | Directional Capacity (vph) | Traffic Volume AM (PM) | v/c Ratio AM (PM) | Auto LOS AM (PM) | Deficiency to Auto LOS 'F' <sup>1</sup> AM (PM) |
|-----------------------------------|----------------------------|------------------------|-------------------|------------------|-------------------------------------------------|
| Blair Rd, north of Ogilvie Rd     |                            |                        |                   |                  |                                                 |
| Northbound                        | 1,000                      | 812 (537)              | 0.81 (0.54)       | D (A)            | -                                               |
| Southbound                        | 1,000                      | 519 (901)              | 0.52 (0.90)       | A (E)            | -                                               |
| Blair Rd, south of Highway 174    |                            |                        |                   |                  |                                                 |
| Northbound                        | 2,000                      | 1,010 (1,030)          | 0.51 (0.52)       | A (A)            | -                                               |
| Southbound                        | 2,000                      | 691 (1,261)            | 0.35 (0.63)       | A (B)            | -                                               |
| Ogilvie Rd, east of Blair Rd      |                            |                        |                   |                  |                                                 |
| Eastbound                         | 2,000                      | 1,143 (1,853)          | 0.57 (0.93)       | A (E)            | -                                               |
| Westbound                         | 2,000                      | 1,437 (1,457)          | 0.72 (0.73)       | C (C)            | -                                               |
| Ogilvie Rd, west of Palmerston Dr |                            |                        |                   |                  |                                                 |
| Eastbound                         | 2,000                      | 1,198 (1,977)          | 0.60 (0.99)       | A (E)            | -                                               |
| Westbound                         | 2,000                      | 1,515 (1,504)          | 0.76 (0.75)       | C (C)            | -                                               |

1: Target LOS F within 600m of Rapid Transit Station

The additional traffic generated by the subject site is not anticipated to have a significant impact on the overall operations of Blair Road or Ogilvie Road. Peak directional traffic along all roadways are anticipated to meet the target LOS E under the 2037 total traffic conditions. Detailed intersection analysis is presented in Section 4.9.2 and includes more in-depth discussion of the anticipated impacts of the proposed development within the study area.

## 4.9 Intersection Design

### 4.9.1 Intersection MMLOS Review

This section provides a review of the signalized study area intersections using complete streets principles. The signalized intersections within the study area has been evaluated for PLOS, BLOS, TLOS, TkLOS, and AutoLOS based on existing conditions. The MMLOS targets considered in this review are associated with those outlined in Exhibit 22 of the *MMLOS Guidelines* for the 'General Urban Area' and when applicable 'Within 600m of a rapid transit station' Policy Area.

The full intersection MMLOS analysis is included in **Appendix L**. A summary of the results is shown in **Table 15**.

**Table 15: Intersection MMLOS Summary**

| Intersection                                | PLOS   |        | BLOS   |        | TLOS   |        | TkLOS  |        | AutoLOS |        |
|---------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
|                                             | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual  | Target |
| Ogilvie Road/Matheson Road/Palmerston Drive | F      | C      | F      | C      | C      | D      | E      | D      | C       | D      |
| Ogilvie Road/Cadboro Road                   | F      | C      | A      | C      | B      | D      | E      | D      | B       | D      |
| Ogilvie Road/City Park Drive/Bathgate Drive | F      | C      | F      | C      | F      | D      | E      | D      | C       | D      |
| Ogilvie Road/1900 Ogilvie Road              | F      | A      | F      | C      | B      | D      | E      | D      | A       | E      |
| Ogilvie Road/City Park Drive                | F      | A      | F      | C      | F      | D      | E      | D      | D       | E      |
| Ogilvie Road/Blair Road                     | F      | A      | F      | C      | F      | C      | E      | D      | F       | E      |
| HWY 174 Westbound off-ramp/Blair Road       | F      | A      | F      | C      | F      | C      | B      | D      | D       | E      |
| HWY 174 Eastbound off-ramp/Blair Road       | F      | A      | A      | C      | D      | -      | C      | D      | E       | E      |

The results of the intersection MMLOS analysis can be summarized as follows:

- None of the study area intersections meet the target PLOS;
- None of the study area intersections meet the target BLOS except for Ogilvie Road/Cadboro Road;
- All of the study area intersections meet the target TLOS except for Ogilvie Road/City Park Drive/Bathgate Drive, Ogilvie Road/City Park Drive, Ogilvie Road/Blair Road, and HWY 174 Westbound off-ramp/Blair Road;
- None of the study area intersections meet the target TkLOS except for HWY 174 Westbound off-ramp/Blair Road and HWY 174 Eastbound off-ramp/Blair Road; and
- All intersections meet the target AutoLOS except for Ogilvie Road/Blair Road.

#### Ogilvie Road/Matheson Road/Palmerston Drive

The intersection does not meet the target PLOS C, BLOS C, or TkLOS.

There is limited opportunity to improve the PLOS and BLOS at this intersection without reducing the number of lanes crossed and providing two-stage left turning cycling facilities on all approaches. The northbound and eastbound right turn movement do not meet the target TkLOS. As the south leg of the intersection does not form part of the City's truck routes, the eastbound and northbound right turn movements are considered acceptable.

Ogilvie Road/Cadboro Road

The intersection does not meet the target PLOS C or TkLOS C.

There is limited opportunity to improve the PLOS at this intersection without reducing the number of lanes crossed. The westbound right turn movement does not meet the target TkLOS. As the north leg of the intersection does not form part of the City's truck routes, the westbound right turn movement is considered acceptable.

Ogilvie Road/City Park Drive/Bathgate Drive

The intersection does not meet the target PLOS C, BLOS C, TLOS, or TkLOS.

There is limited opportunity to improve the PLOS and BLOS at this intersection without reducing the number of lanes crossed and providing two-stage left turning cycling facilities on all approaches. The north and south approaches do not meet the target TLOS. As the major street is in the east-west direction any additional capacity will come at the expense of the transit routes along the main corridor and is therefore assumed to be acceptable. The eastbound and westbound right turn movements do not meet the target TkLOS. As the north and south legs of the intersection do not form part of the City's truck routes, the eastbound and westbound right turn movements are considered acceptable.

Ogilvie Road/1900 Ogilvie Road

The intersection does not meet the target PLOS C, BLOS C, or TkLOS.

There is limited opportunity to improve the PLOS and BLOS at this intersection without reducing the number of lanes crossed and providing two-stage left turning cycling facilities on all approaches. The eastbound and westbound right turn movements do not meet the target TkLOS. As the north and south legs of the intersection do not form part of the City's truck routes, the eastbound and westbound right turn movements are considered acceptable.

Ogilvie Road/City Park Drive

The intersection does not meet the target PLOS C, BLOS C, TLOS, or TkLOS.

There is limited opportunity to improve the PLOS and BLOS at this intersection without reducing the number of lanes crossed and providing two-stage left turning cycling facilities on all approaches. The south approach does not meet the target TLOS. As the major street is in the east-west direction any additional capacity will come at the expense of the transit routes along the main corridor and is therefore assumed to be acceptable. The westbound right turn movement does not meet the target TkLOS. As the north leg of the intersection does not form part of the City's truck routes, the westbound right turn movement is considered acceptable.

Ogilvie Road/Blair Road

The intersection does not meet the target PLOS C, BLOS C, TLOS, TkLOS, or AutoLOS.

No mitigation measures are proposed as part of the proposed development, as the City's planned Blair-Blair Transit Priority Corridor is anticipated to provide improvements for all modes at the Ogilvie Road/Blair Road intersection. As described in Section 2.2.1, the proposed alterations include a protected intersection design with painted zebra pavement markings at crosswalks, dedicated cycling facilities, and additional travel lanes.

HWY 174 Westbound off-ramp/Blair Road

The intersection does not meet the target PLOS C, BLOS C or TLOS.

No mitigation measures are proposed as part of the proposed development, as the City's planned Blair Transit Priority Project (Innes Road to Blair LRT Station) is anticipated to provide improved pedestrian, bike, and transit facilities along the Blair Road corridor. As described in Section 2.2.1, among the proposed alterations at this intersection are protected northeast and northwest corners, a sidewalk, and cycle track along the east side of Blair Road, a multi-use path on the west side of Blair Road, painted zebra pavement markings at crosswalks, and dedicated transit turning lanes on the 1980 Ogilvie Road approach.

#### HWY 174 Eastbound off-ramp/Blair Road

The intersection does not meet the target PLOS C.

No mitigation measures are proposed as part of the proposed development, as the City's planned Blair Transit Priority Project (Innes Road to Blair LRT Station) is anticipated to provide improved pedestrian, bike, and transit facilities along the Blair Road corridor. Among the proposed alterations at this intersection are a protected southeast corner, a sidewalk, and cycle track along the east side of Blair Road, a multi-use path on the west side of Blair Road, and painted zebra pavement markings at crosswalks.

### 4.9.2 2037 Total Intersection Operations

Intersection capacity analysis has been conducted for the 2037 total traffic conditions. As described in Section 3.1.1, the proposed development results in a net reduction in vehicle trips compared to the previous concept. As such, the analysis previously presented represents a conservative analysis and has not been updated. The results of the analysis are summarized in **Tables 16 and 17** for the weekday AM and PM peak hours based on the previous concept plan. Detailed reports are included in **Appendix K**.

**Table 16: 2037 Total Traffic Operations**

| Intersection                                | AM Peak      |     |       | PM Peak      |     |       |
|---------------------------------------------|--------------|-----|-------|--------------|-----|-------|
|                                             | Delay or V/C | LOS | Mvmt  | Delay or V/C | LOS | Mvmt  |
| Ogilvie Road/Matheson Road/Palmerston Drive | 0.62         | A   | WBT/R | 0.81         | D   | EBT/R |
| Ogilvie Road/Cadboro Road                   | 0.51         | A   | WBT/R | 0.74         | C   | EBT/R |
| Ogilvie Road/City Park Drive/Bathgate Drive | 0.65         | B   | NBL   | 0.68         | B   | NBL   |
| Ogilvie Road/1900 Ogilvie Road              | 0.51         | A   | WBT/R | 0.65         | B   | EBT   |
| Ogilvie Road/City Park Drive                | 0.47         | A   | WBT   | 0.92         | E   | EBT   |
| Ogilvie Road/Blair Road                     | 1.30         | F   | WBL   | 1.27         | F   | NBR   |
|                                             |              |     |       | 1.25         | F   | WBL   |
|                                             | 1.02         | F   | NBT   | 1.19         | F   | EBR   |
|                                             |              |     |       | 1.03         | F   | EBT   |
|                                             |              |     |       | 1.02         | F   | SBT/R |
| HWY 174 Westbound off-ramp/Blair Road       | 0.72         | C   | NBT   | 0.89         | D   | EBR   |
| HWY 174 Eastbound off-ramp/Blair Road       | 0.69         | B   | WBR   | 0.98         | E   | SBT/L |

Table 17: 2037 Total Queues

| Intersection               | Mvmt  | Storage/<br>Spacing <sup>(1)</sup> | AM Peak         |                                 |                                 | PM Peak         |                                 |                                 |
|----------------------------|-------|------------------------------------|-----------------|---------------------------------|---------------------------------|-----------------|---------------------------------|---------------------------------|
|                            |       |                                    | v/c<br>[LOS]    | 50 <sup>th</sup> %<br>Queue (m) | 95 <sup>th</sup> %<br>Queue (m) | v/c<br>[LOS]    | 50 <sup>th</sup> %<br>Queue (m) | 95 <sup>th</sup> %<br>Queue (m) |
| Ogilvie<br>Road/Blair Road | NBL   | 120m                               | 0.95 [E]        | 91                              | #126                            | 0.84 [D]        | 39                              | #61                             |
|                            | NBT   | 220m                               | <b>1.02 [F]</b> | ~194                            | <b>#267</b>                     | 0.62 [B]        | 73                              | 107                             |
|                            | NBR   | 200m                               | 0.76 [C]        | 51                              | 103                             | <b>1.27 [F]</b> | ~227                            | <b>#310</b>                     |
|                            | SBL   | 30m                                | 0.70 [B]        | 19                              | #42                             | 0.56 [A]        | 20                              | 36                              |
|                            | SBT/R | 100m                               | 0.62 [B]        | 56                              | 74                              | <b>1.02 [F]</b> | ~129                            | #170                            |
|                            | EBL   | 70m                                | 0.63 [B]        | 29                              | 47                              | 0.79 [C]        | 42                              | #73                             |
|                            | EBT   | 230m                               | 0.59 [A]        | 60                              | 78                              | <b>1.03 [F]</b> | ~133                            | <b>#173</b>                     |
|                            | EBR   | 230m                               | 0.48 [A]        | 0                               | 23                              | <b>1.19 [F]</b> | ~165                            | <b>#238</b>                     |
|                            | WBL   | 110m                               | <b>1.30 [F]</b> | ~118                            | <b>#155</b>                     | <b>1.25 [F]</b> | ~155                            | <b>#195</b>                     |
|                            | WBT/R | 225m                               | 0.84 [D]        | 108                             | #157                            | 0.52 [A]        | 68                              | 87                              |

1. Indicates the storage length for auxiliary lanes or the spacing to the nearest upstream intersection for through lanes

#: volume for the 95<sup>th</sup> percentile cycle exceeds capacity

~: approach is above capacity

Comparing the previous tables and the 2037 background conditions, traffic generated by the proposed development is anticipated to have marginal operational effects within the study area. The southbound through/right turn lane is now over capacity with a V/C of 1.02 and previously had a V/C ratio of 0.97 during background traffic conditions and the 50<sup>th</sup> and 95<sup>th</sup> percentiles queues have increased by roughly one vehicle. The discussion of over-capacity movements and queue lengths are generally consistent with those described in Section 3.4.2.

Traffic generated by the development is expected to increase the volume of westbound left turning vehicles at Ogilvie Road/City Park Drive (east) by 85% in the PM peak hour while no additional westbound left traffic is projected in the AM peak hour. Currently the westbound left turn lane experiences a collision rate per MEV of 3.27 when comparing the ten collisions that occurred in the left turn lane (nine turning movement collisions and one rear end collision) and the existing traffic volumes. While a collision rate of 3.27 per MEV could be considered high, collision rates tend to over-emphasize intersections or movements with lower volumes.

The westbound left turn movement at this intersection currently operates with a permitted phasing in the AM peak hour and permitted and protected left turn phasing in the PM peak hour. Monitoring of collisions associated with the westbound left turn movement should be completed by the City as this development proceeds. Should the westbound left turn collision pattern continue, consideration by the City could be given for implementing a fully protected left turn phase. Analysis was completed to compare the impacts of including a fully protected left turn phase to the east and west bound legs with 2037 total traffic conditions. The results of the analysis are summarized in **Table 18** for the weekday AM and PM peak hours. Detailed reports are included in **Appendix K**.

Table 18: Ogilvie Road/City Park Drive Fully Protected Phasing Comparison

| Intersection                 | AM Peak         |     |      | PM Peak         |     |      |
|------------------------------|-----------------|-----|------|-----------------|-----|------|
|                              | Delay<br>or V/C | LOS | Mvmt | Delay<br>or V/C | LOS | Mvmt |
| Ogilvie Road/City Park Drive | 0.60            | A   | EBL  | 1.00            | E   | EBT  |

The existing storage length of the westbound left turn lane is 100m and the eastbound left turn lane is 40m. The protected phasing is anticipated to increase the 95th percentile westbound left turn queues from 18m to 31m in the AM peak hour and from 56m to 82m during the PM peak hour. Eastbound left turn queues are also anticipated to increase from 8m to 37m during the AM peak

hour and from 3m to 9m during the PM peak hour. While queueing does increase under fully protected phasing the 95<sup>th</sup> percentile queues in the left turning lanes could be supported by existing storage lengths at the intersection.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, the conclusions and recommendations of this TIA can be summarized as follows:

### Forecasting

- The proposed development is anticipated to generate a net additional 505 person trips during the AM peak hour (including 114 vehicle trips), and an additional 499 person trips during the PM peak hour (including 118 vehicle trips).

### Development Design

- The proposed development is anticipated to include one new vehicular access to City Park Drive and one shared access with the adjacent office building at 1900 City Park Drive. Pedestrian connections are anticipated to be provided to the MUP's east and south of the site, as well as to the sidewalks along City Park Drive.

### Transportation Demand Management (TDM)

- A review of the City's TDM Measures Checklist has been conducted by the proponent, who will consider the following TDM measures on a phase by phase basis within this development:
  - Display local area maps with walking/cycling access routes and key destinations at major entrances;
  - Display relevant transit schedules and route maps at entrances;
  - Unbundle parking from purchase cost (condo) or monthly rent (apartment); and
  - Provide multi-modal travel information package to new residents.

### Neighbourhood Traffic Management

- Traffic generated by the proposed development is anticipated to increase traffic along City Park Drive at Ogilvie Road/Bathgate Drive by 29-30 vehicles, or one vehicle every two minutes during peak hours. Traffic at City Park Drive at Ogilvie Road/1941 Ogilvie Road is anticipated to increase by 85-89 vehicles, or one to two vehicles a minute during peak hours.
- Since City Park Drive is expected to have lower volumes close to the subject site, no neighbourhood traffic management measures have been recommended as part of this proposed development.

### Transit

- The proposed development is anticipated to generate an additional 262 transit trips during the AM peak hour and an additional 252 transit trips during the PM peak hour. The additional transit trips generated by the proposed development are anticipated to have a marginal impact on the current transit operations surrounding the site.
- A total of 14-22 people are anticipated to cross the street to Stop #4447 during the peak hours. As the existing transit stop is considered a desire line for pedestrians from the proposed development, consideration should be given to providing a pedestrian crossover

along City Park Drive as the development advances. The timing for implementation of a future pedestrian crossover will be reviewed on a phase-by-phase basis through future Site Plan Control applications.

#### Network Concept

- The additional traffic generated by the subject site is not anticipated to have a significant impact on the overall operations of Blair Road or Ogilvie Road. Peak directional traffic along all roadways are anticipated to meet the target LOS E under the 2037 total traffic conditions.

#### Intersection MMLoS

- None of the study area intersections meet the target PLOS. There is limited opportunity to improve the PLOS at all intersections without reducing the number of lanes crossed;
- None of the study area intersections meet the target BLOS except for Ogilvie Road/Cadboro Road. There is limited opportunity to improve the BLOS at all intersections without providing two-stage left turning cycling facilities;
- All of the study area intersections meet the target TLOS except for Ogilvie Road/City Park Drive/Bathgate Drive, Ogilvie Road/City Park Drive, Ogilvie Road/Blair Road, and HWY 174 Westbound off-ramp/Blair Road;
- None of the study area intersections meet the target TkLOS except for HWY 174 Westbound off-ramp/Blair Road and HWY 174 Eastbound off-ramp/Blair Road; and
- All intersections meet the target AutoLOS except for Ogilvie Road/Blair Road.

#### Background Traffic Analysis

- The westbound left turning movement and northbound through movements at the Ogilvie Road/Blair Road intersection do not meet the target LOS E during the AM peak hour and the northbound right, westbound left, eastbound right and eastbound through movements do not meet the target LOS E in the PM peak hour. All other intersections within the study area are expected to meet the City's target.
- During the AM peak hour at the Ogilvie Road/Blair Road intersection, the average and maximum queue lengths of the westbound left movement exceed the current storage capacity. Additionally, the maximum queue lengths of the northbound left, the northbound through, and the southbound left turn movements exceed the existing storage capacity.
- During the PM peak hour at the Ogilvie Road/Blair Road intersection, the average and maximum queue lengths of the northbound right, the southbound through/right, and the westbound left movements and the maximum queue length for the southbound left turn movement exceed the existing storage length.

#### Total Traffic Analysis

- Traffic generated by the proposed development is anticipated to have marginal operational effects within the study area. The discussion of over-capacity movements and queue lengths are generally consistent with the background traffic analysis.
- Monitoring of collisions associated with the westbound left turn movement should be completed by the City as this development proceeds. Should the westbound left turn

collision pattern continue, consideration by the City could be given for implementing a fully protected left turn phase. While queueing does increase under fully protected phasing the 95th percentile queues in the left turning lanes could be supported by existing storage lengths at the intersection.

Based on the foregoing, the proposed development can be recommended from a transportation perspective.

## NOVATECH

Prepared by:



Trevor Van Wiechen, P.Eng.  
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Reviewed by:

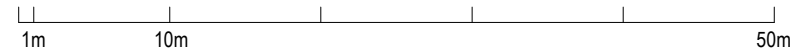


Brad Byvelds, P.Eng.  
Senior Project Manager | Transportation

## **APPENDIX A**

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Proposed Concept Plan



1  
A100

- NO. DESSIN Dwg Number

## **APPENDIX B**

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### TIA Screening Form

## City of Ottawa 2017 TIA Guidelines Screening Form

### 1. Description of Proposed Development

|                                    |                                                            |
|------------------------------------|------------------------------------------------------------|
| Municipal Address                  | <b>1900/2000 City Park Drive</b>                           |
| Description of Location            | <b>Mid-block between Ambassador Ave and Jobin Crescent</b> |
| Land Use Classification            | <b>Multi-tower mixed-use</b>                               |
| Development Size (units)           |                                                            |
| Development Size (m <sup>2</sup> ) |                                                            |
| Number of Accesses and Locations   | <b>Two access on south side of City Park Drive</b>         |
| Phase of Development               |                                                            |
| Buildout Year                      |                                                            |

If available, please attach a sketch of the development or site plan to this form.

### 2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

| Land Use Type                       | Minimum Development Size |
|-------------------------------------|--------------------------|
| Single-family homes                 | 40 units                 |
| Townhomes or apartments             | 90 units                 |
| Office                              | 3,500 m <sup>2</sup>     |
| Industrial                          | 5,000 m <sup>2</sup>     |
| Fast-food restaurant or coffee shop | 100 m <sup>2</sup>       |
| Destination retail                  | 1,000 m <sup>2</sup>     |
| Gas station or convenience market   | 75 m <sup>2</sup>        |

*\* If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

**If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied.**

### 3. Location Triggers

|                                                                                                                                                                      | Yes | No |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks? |     | X  |
| Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*                                                                      | ✓   |    |

*\*DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).*

**If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.**

### 4. Safety Triggers

|                                                                                                                                                                                                                           | Yes | No |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| Are posted speed limits on a boundary street are 80 km/hr or greater?                                                                                                                                                     |     | X  |
| Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?                                                                                                              |     | X  |
| Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)? |     | X  |
| Is the proposed driveway within auxiliary lanes of an intersection?                                                                                                                                                       |     | X  |
| Does the proposed driveway make use of an existing median break that serves an existing site?                                                                                                                             |     | X  |
| Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?                                                                                        |     | X  |
| Does the development include a drive-thru facility?                                                                                                                                                                       |     | X  |

**If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.**

### 5. Summary

|                                                           | Yes | No |
|-----------------------------------------------------------|-----|----|
| Does the development satisfy the Trip Generation Trigger? | ✓   |    |
| Does the development satisfy the Location Trigger?        | ✓   |    |
| Does the development satisfy the Safety Trigger?          |     | X  |



*Transportation Impact Assessment Screening Form*

If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).

## **APPENDIX C**

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### OC Transpo Route Maps



EAST  
EST

○ Blair

○ Cyrville

○ St-Laurent

○ Tremblay

■ VIA

○ Hurdman  SOUTH  
SUD → 

○ Lees

24 min. ○ uOttawa

○ Rideau

○ Parliament  
Parlement

○ Lyon

○ Pimisi

○ Bayview 2

○ Tunney's Pasture



WEST  
OUEST





Fréquent

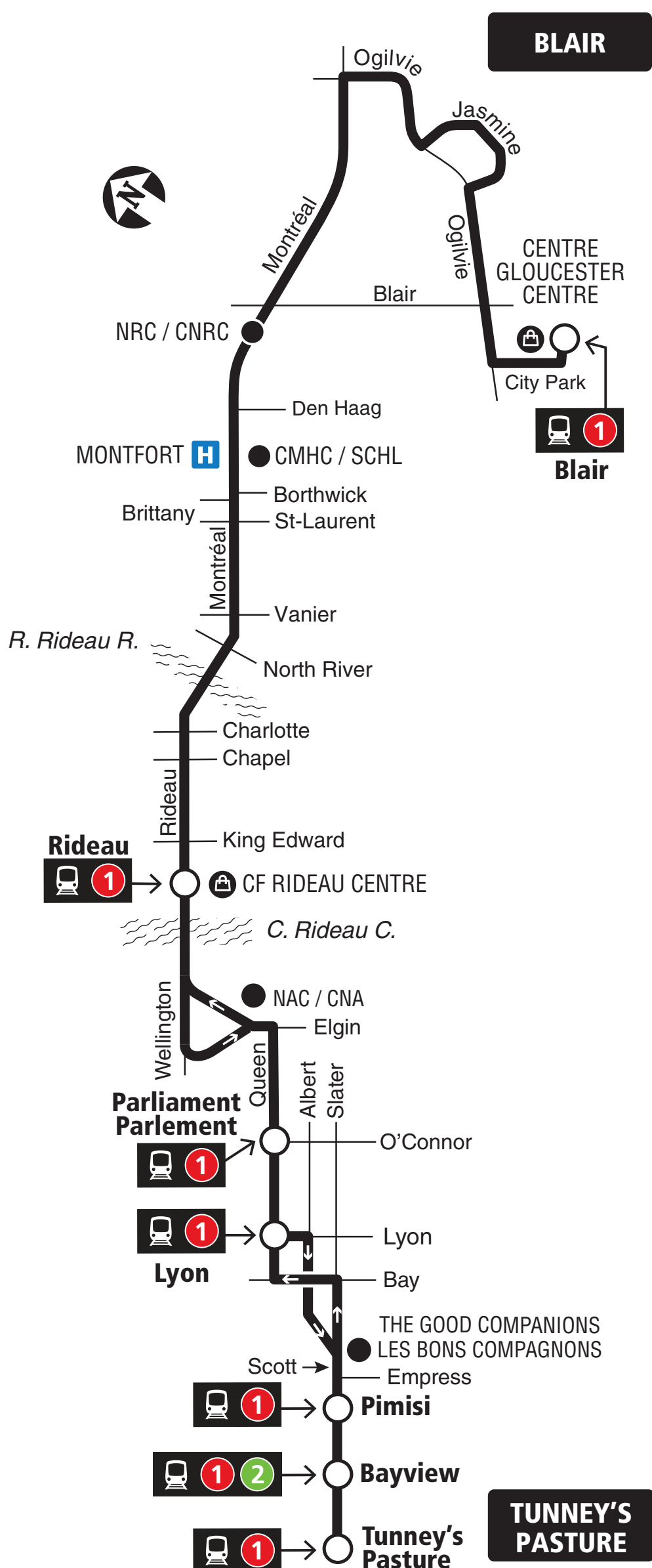
BLAIR

TUNNEY'S  
PASTURE

7 days a week / 7 jours par semaine

All day service

Service toute la journée



Station



Shopping Centre / Centre commercial

04.2025

2025.04

This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

Ce circuit sera mis en service  
le 27 avril 2025, lorsque le réseau  
L'autobus réinventé entrera en vigueur.

Customer Service /  
Service à la clientèle ..... 613-560-5000

Security / Sécurité ..... 613-741-2478

 Transpo

octranspo.com





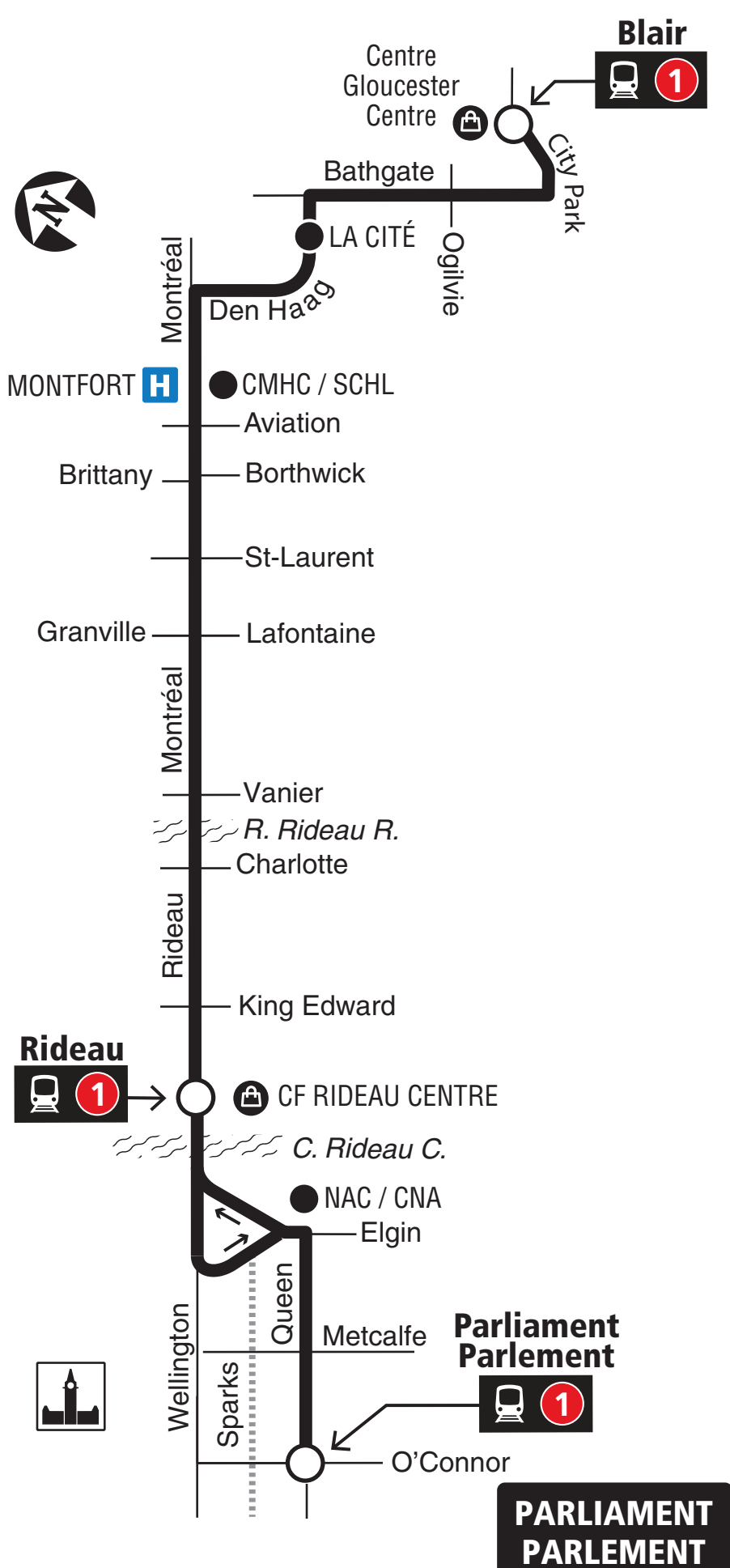
# 15

## BLAIR PARLIAMENT PARLEMENT

*Local*

**Monday to Friday / Lundi au vendredi**  
Peak periods only  
Périodes de pointe seulement

**BLAIR**



Station



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**octranspo.com**

# 21

## CANOTEK BLAIR

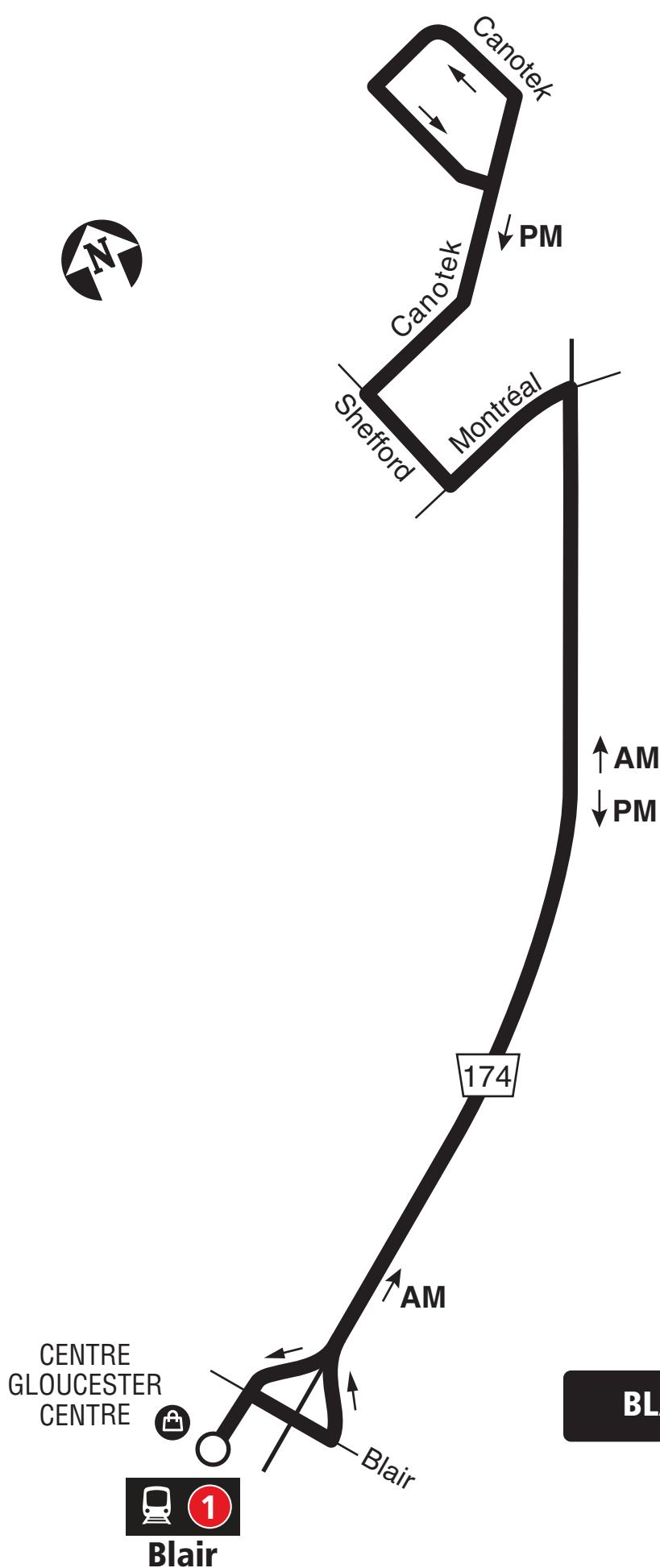
*Local*

**Monday to Friday / Lundi au vendredi**

Peak periods only

Périodes de pointe seulement

**CANOTEK**



**BLAIR**



Station



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**

 **Transpo**

**octranspo.com**



# 23

## ROTHWELL HEIGHTS BLAIR

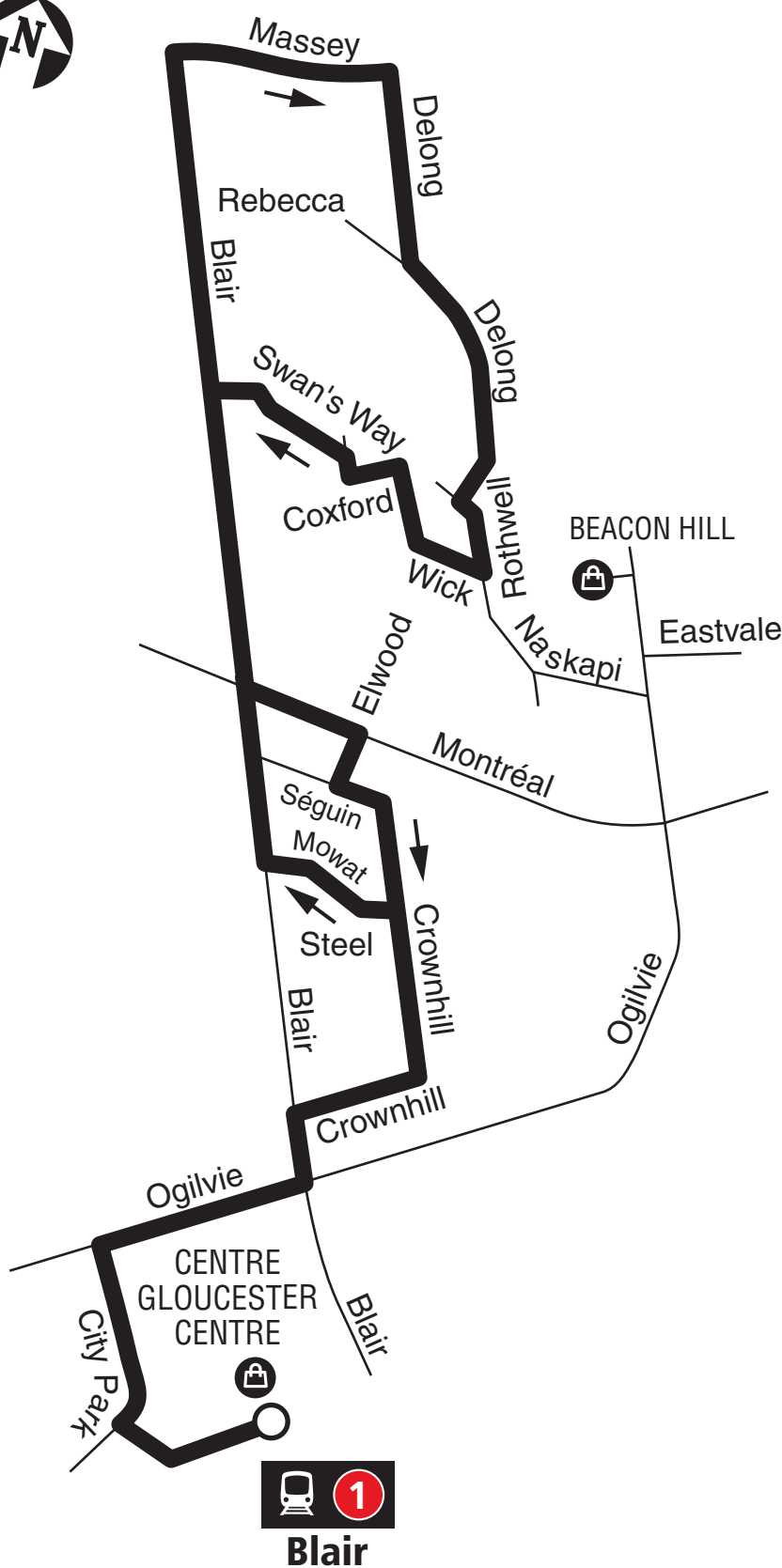
*Local*

**Monday to Friday / Lundi au vendredi**

Peak periods only

Périodes de pointe seulement

**ROTHWELL  
HEIGHTS**



**BLAIR**



Station



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**octranspo.com**



# 24

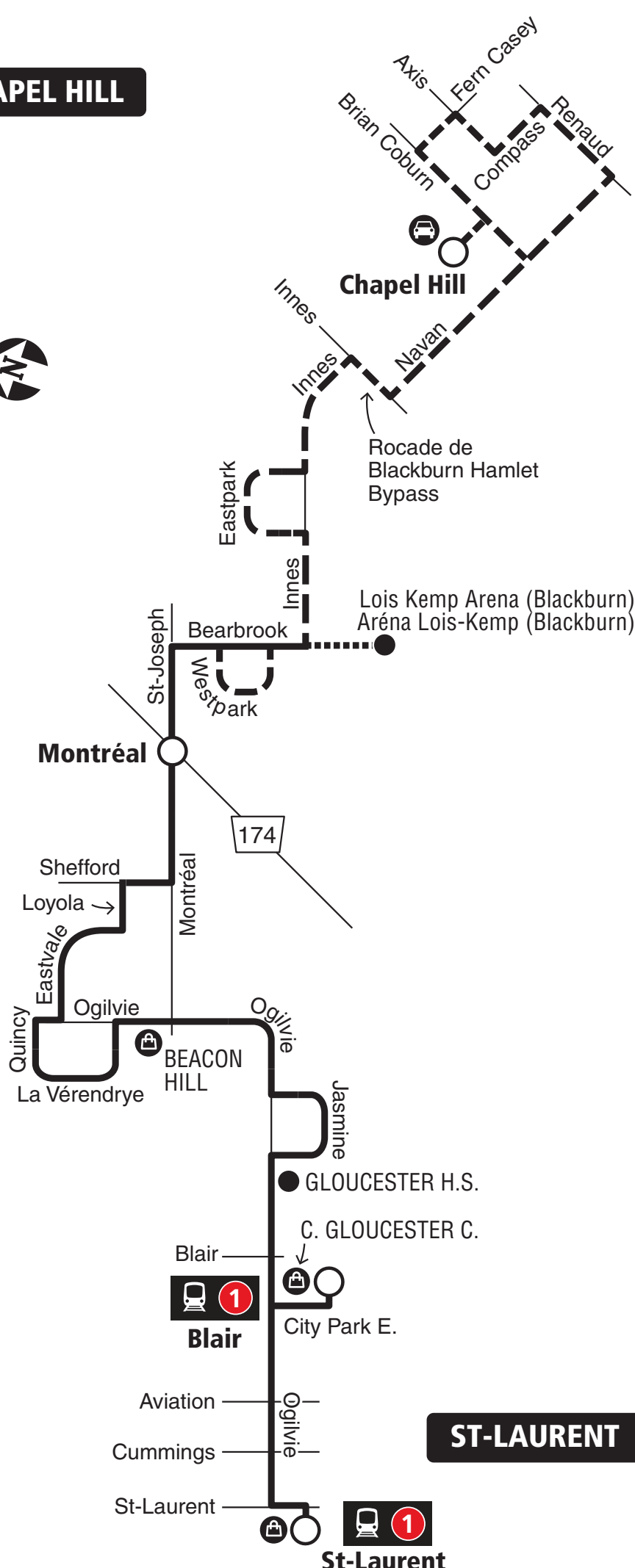
## CHAPEL HILL ST-LAURENT

*Local*

**7 days a week / 7 jours par semaine**

All day service  
Service toute la journée

**CHAPEL HILL**



**ST-LAURENT**



Weekdays only / En semaine seulement



Weekends only / Fin de semaine seulement



Station



Shopping Centre / Centre commercial



Park & Ride / Parc relais

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**octranspo.com**



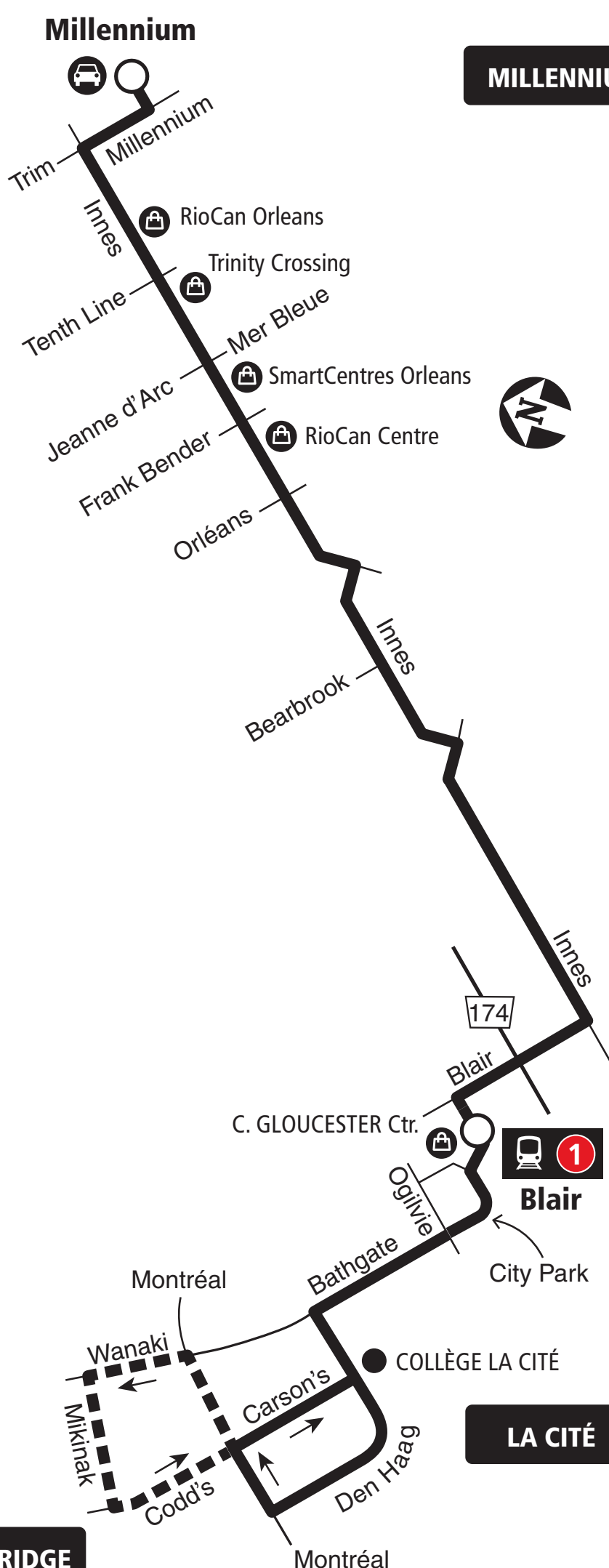
**Fréquent**

# WATERIDGE LA CITÉ MILLENNIUM

**7 days a week / 7 jours par semaine**

All day service

Service toute la journée



**WATERIDGE**

**LA CITÉ**



Station



Park & Ride / Parc relais



Shopping Centre / Centre commercial



Monday to Friday only  
Lundi au vendredi seulement

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**octranspo.com**







# 30

## BLAIR

## MILLENNIUM

### Local

**7 days a week / 7 jours par semaine**

All day service  
Service toute la journée

**BLAIR**

**Blair**



**1**

C. GLOUCESTER Ctr.

Blair

Montréal

**Montréal**

St-Joseph

174

Complexe récréatif  
Bob MacQuarrie - Orléans  
Recreation Complex



**Jeanne d'Arc**

St-Joseph

Orléans

des Épinettes

Mer Bleue

Tenth Line

Esprit

Brian Coburn

Portobello

Innes

Centre Récréatif  
François-Dupuis  
Recreation Centre

Montmorency

Trim

**Millennium**



É.S. Gisèle Lalonde

**MILLENNIUM**



Station

04.2025



Park & Ride / Parc relais



Shopping Centre / Centre commercial

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**octranspo.com**



# 32

## BLAIR CHAPEL HILL

### Local

**Monday to Friday / Lundi au vendredi**

Peak periods - Limited midday service

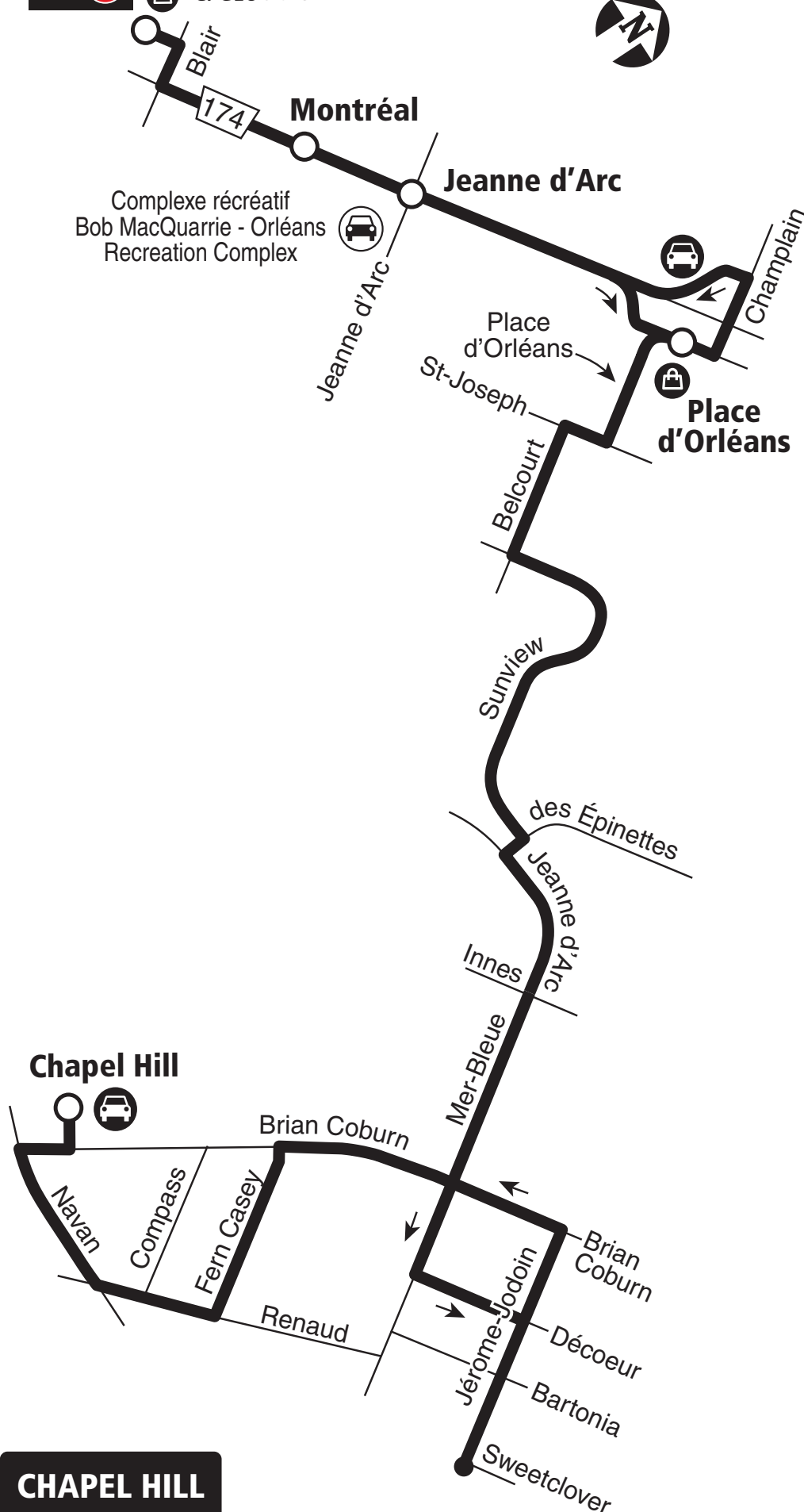
Périodes de pointe - Service limité en mi-journée

#### BLAIR

Blair



C. GLOUCESTER Ctr.



#### CHAPEL HILL



Station

04.2025



Park & Ride / Parc relais



Shopping Centre / Centre commercial

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**octranspo.com**



# 33

## PLACE D'ORLÉANS BLAIR

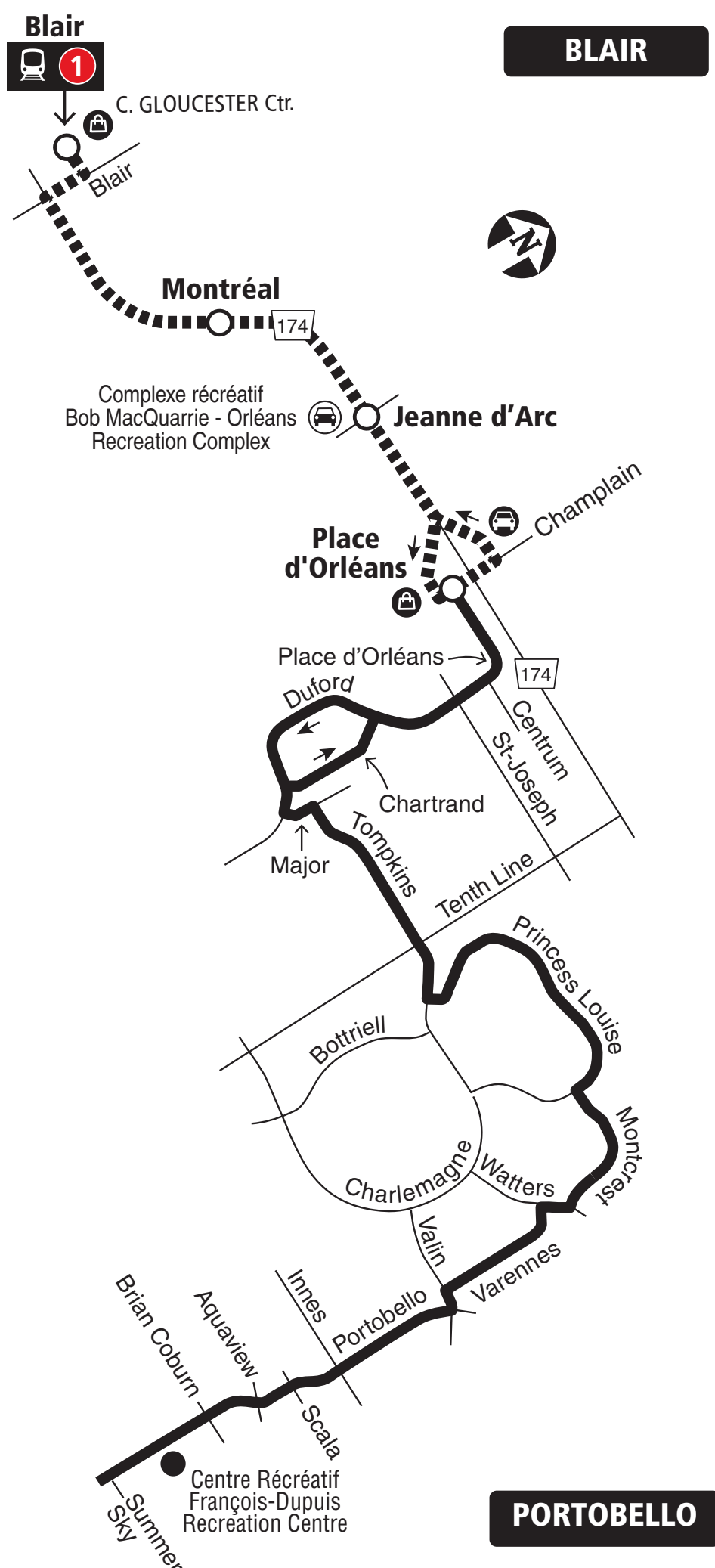
### PORTOBELLO

#### Local

**7 days a week / 7 jours par semaine**

All day service

Service toute la journée



Station

04.2025



Peak period and select midday trips /  
Périodes de pointe et trajets sélectionnés  
en mi-journée



Park & Ride / Parc relais



Shopping Centre / Centre commercial

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**

**Transpo**

**octranspo.com**



# 35

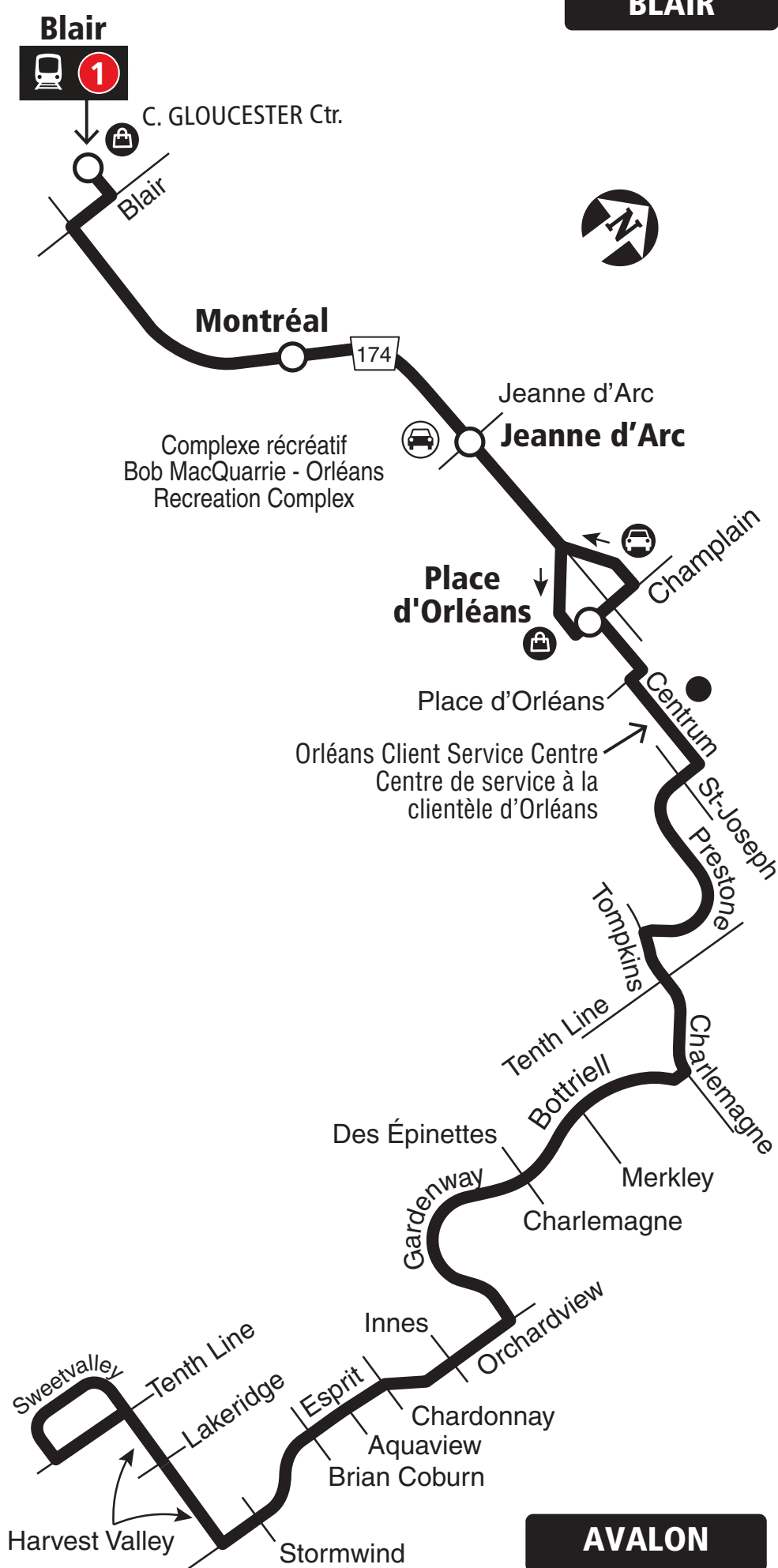
## AVALON BLAIR

### Local

**7 days a week / 7 jours par semaine**

All day service  
Service toute la journée

**BLAIR**



Station



Park & Ride / Parc relais



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle . . . . . **613-560-5000**

Security / Sécurité . . . . . **613-741-2478**



**octranspo.com**

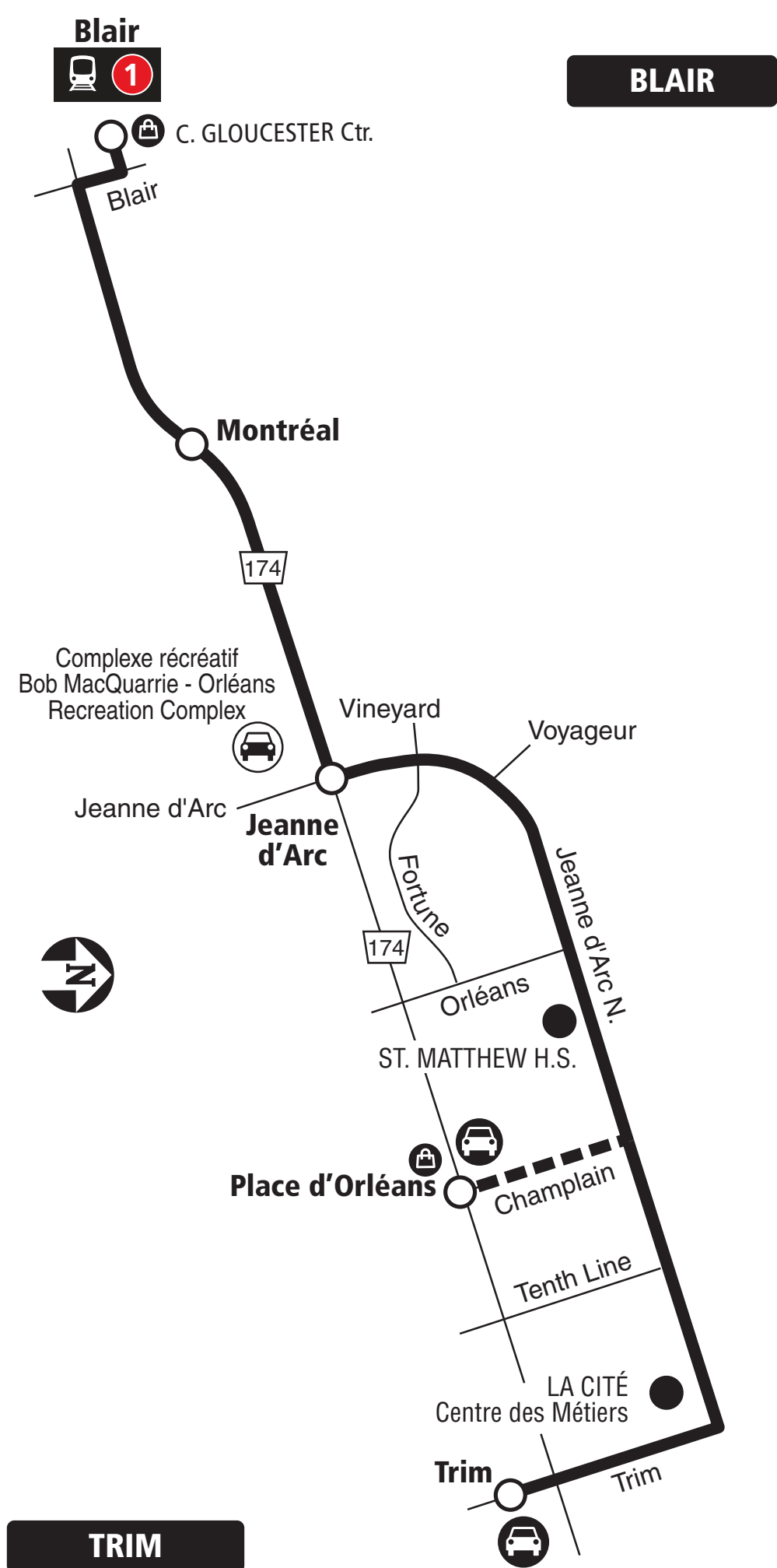
# 38

## BLAIR TRIM

### Local

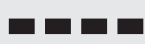
**7 days a week / 7 jours par semaine**

All day service  
Service toute la journée



Station

04.2025



No service westbound AM and eastbound PM /  
Aucun service vers l'ouest AM et vers l'est PM



Park & Ride / Parc relais



Shopping Centre / Centre commercial

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**Transpo**

**octranspo.com**

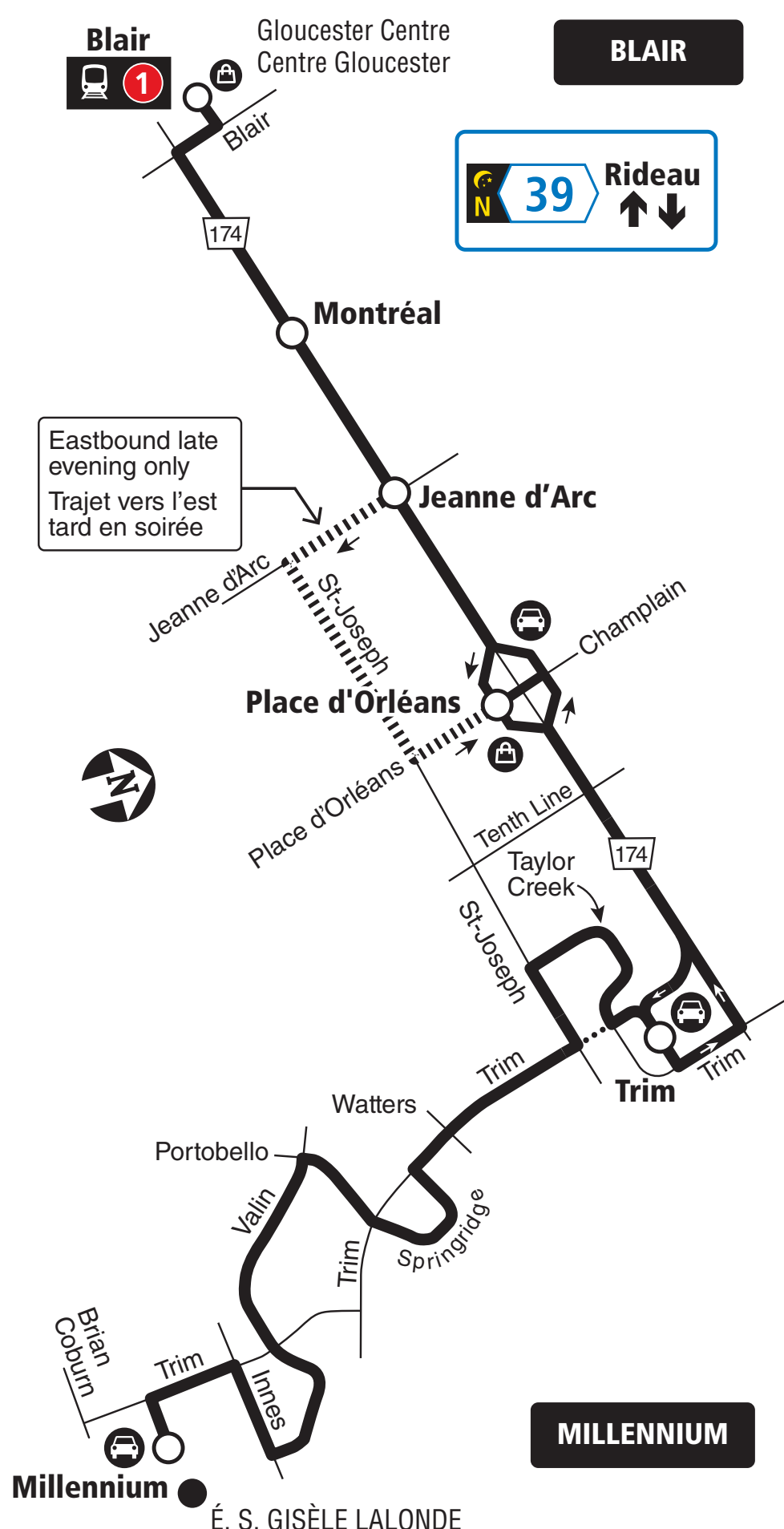


## BLAIR MILLENNIUM

*Fréquent*

**7 days a week / 7 jours par semaine**

All day and overnight service  
Service toute la journée et la nuit



- Station
- Eastbound late evening  
Trajet vers l'est tard en soirée
- Some trips / Quelques trajets
- Park & Ride / Parc relais
- Shopping Centre / Centre commercial

04.2025



When O-Train Line 1 is not running overnight, Route 39 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 39 sera prolongée au centre-ville jusqu'à la station Rideau.

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025,** lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**

**Transpo**

**octranspo.com**





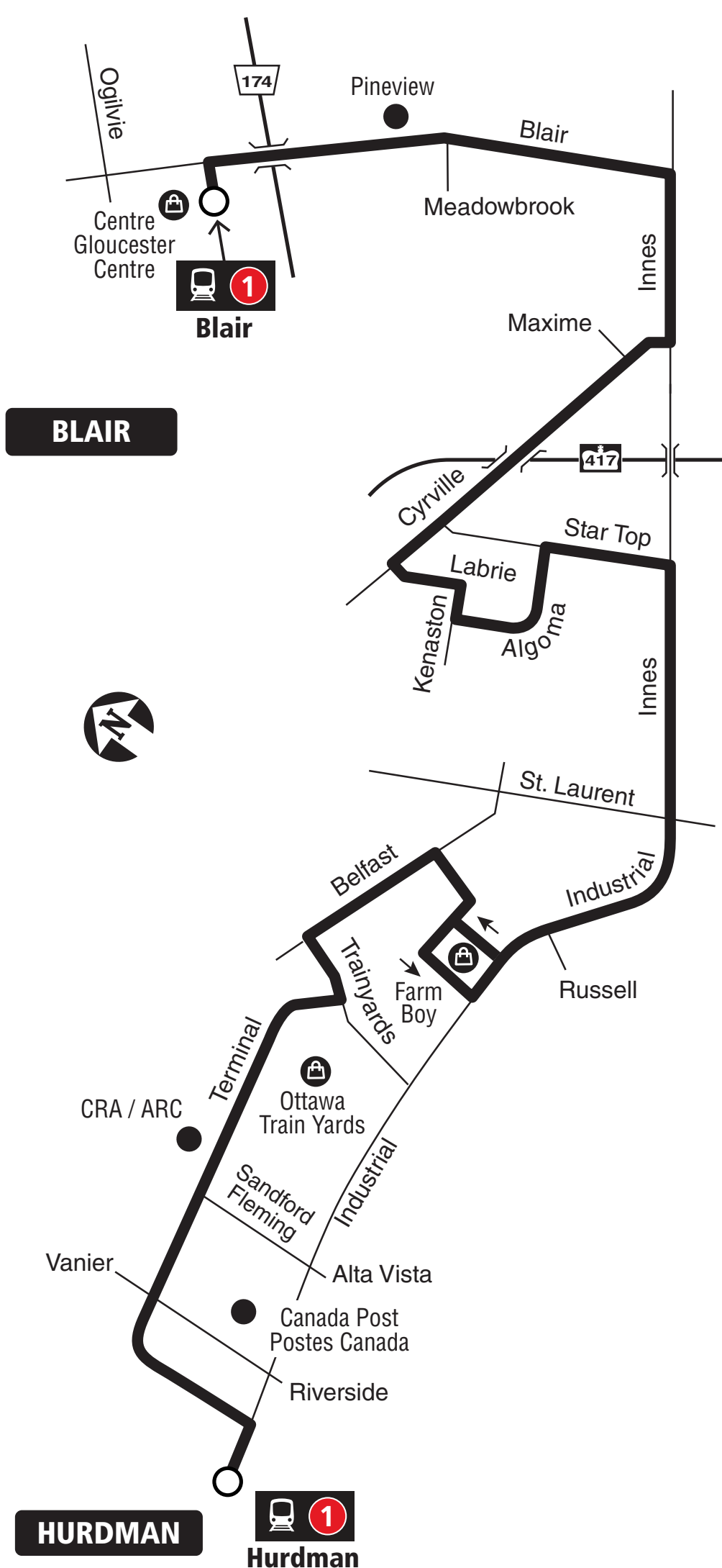
42

# BLAIR HURDMAN

## Local

**7 days a week / 7 jours par semaine**

No late eve. service Mon. to Fri. No eve. service  
Sunday / Aucun service en fin de soirée du lun.  
au ven. Aucun service le soir le dimanche



Station



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**octranspo.com**



# 221

## BLAIR CUMBERLAND

### Connexion

#### Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



Station



Park & Ride / Parc relais



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025,** lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**



**octranspo.com**



# 222

## BLAIR

## VARs

### Connexion

**Monday to Friday / Lundi au vendredi**

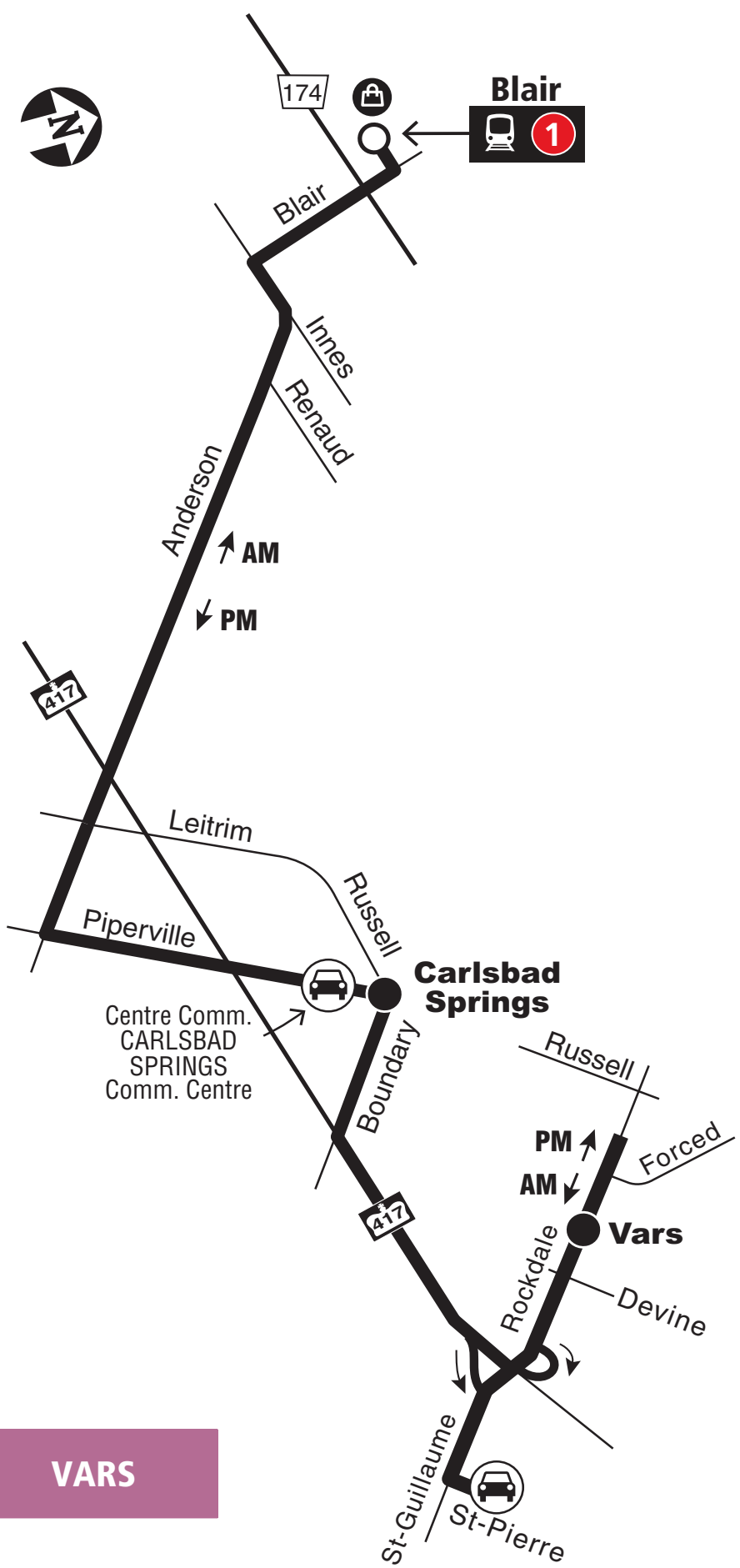
Peak periods only

Périodes de pointe seulement

AM



BLAIR



PM



VARs



Station



Park & Ride / Parc relais



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**

**Transpo**

**octranspo.com**



# 237

## Connexion

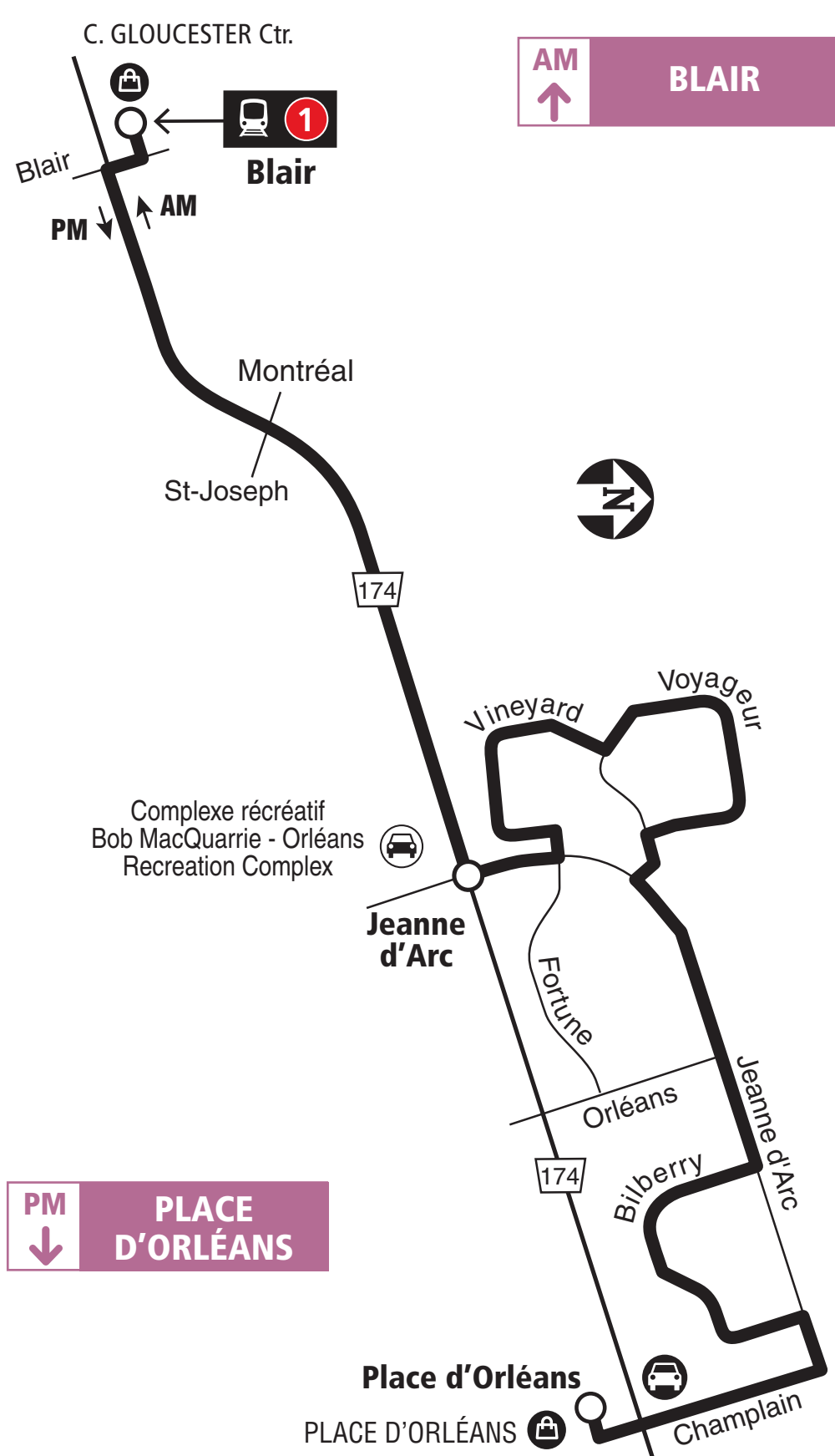
### BLAIR

### PLACE D'ORLÉANS

**Monday to Friday / Lundi au vendredi**

Peak periods only

Périodes de pointe seulement



Station



Park & Ride / Parc relais



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle . . . . . **613-560-5000**

Security / Sécurité . . . . . **613-741-2478**

**Transpo**

**octranspo.com**



# 226

## BLAIR

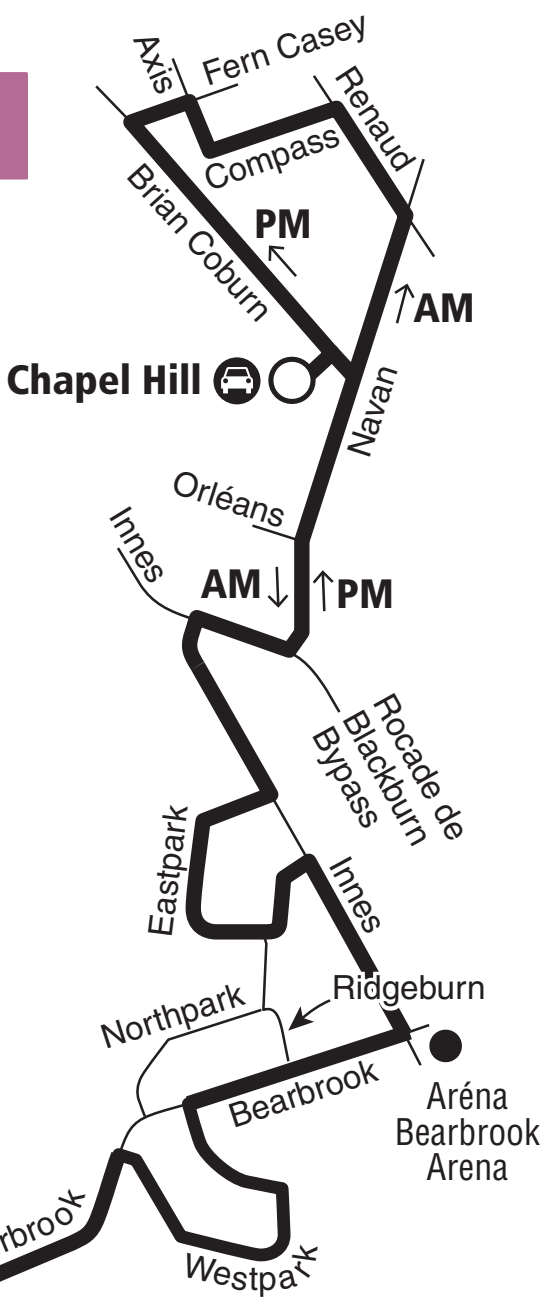
## CHAPEL HILL

### Connexion

**Monday to Friday / Lundi au vendredi**

Peak periods only /  
Période de pointe seulement

**PM**  
**CHAPEL HILL**



**AM**  
**BLAIR**



Station



Park & Ride / Parc relais



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.



Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**

**Transpo**

**octranspo.com**



# 228

## BLAIR

### NAVAN / SARSFIELD

## Connexion

### Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



Station



Park & Ride / Parc relais



Shopping Centre / Centre commercial

04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service /  
Service à la clientèle ..... **613-560-5000**

Security / Sécurité ..... **613-741-2478**

**Transpo**

**octranspo.com**



# 234

## Connexion

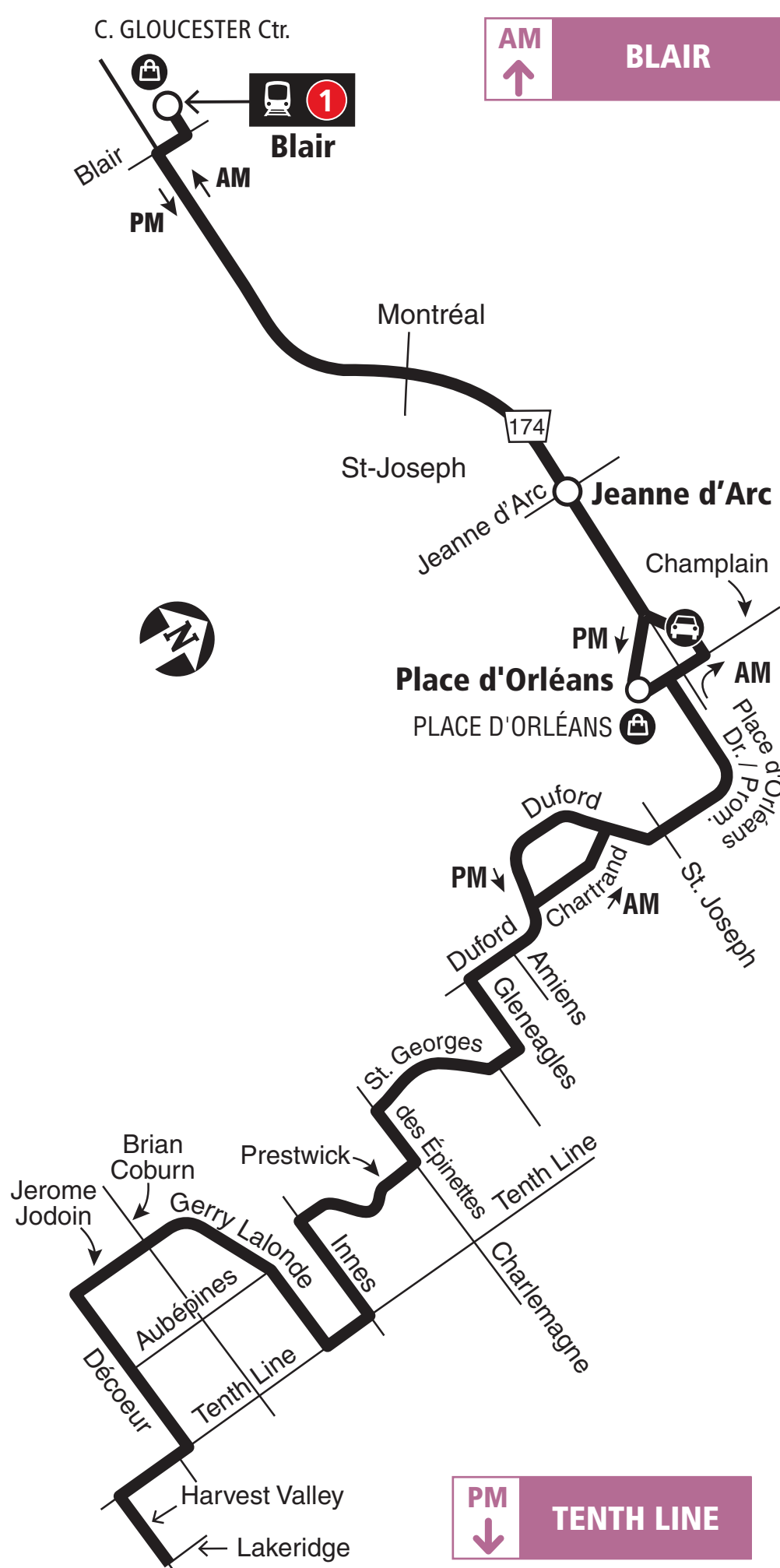
### BLAIR

### TENTH LINE

**Monday to Friday / Lundi au vendredi**

Peak periods only

Périodes de pointe seulement



04.2025

2025.04

**This route starts on April 27, 2025** when the New Ways to Bus network comes into effect.

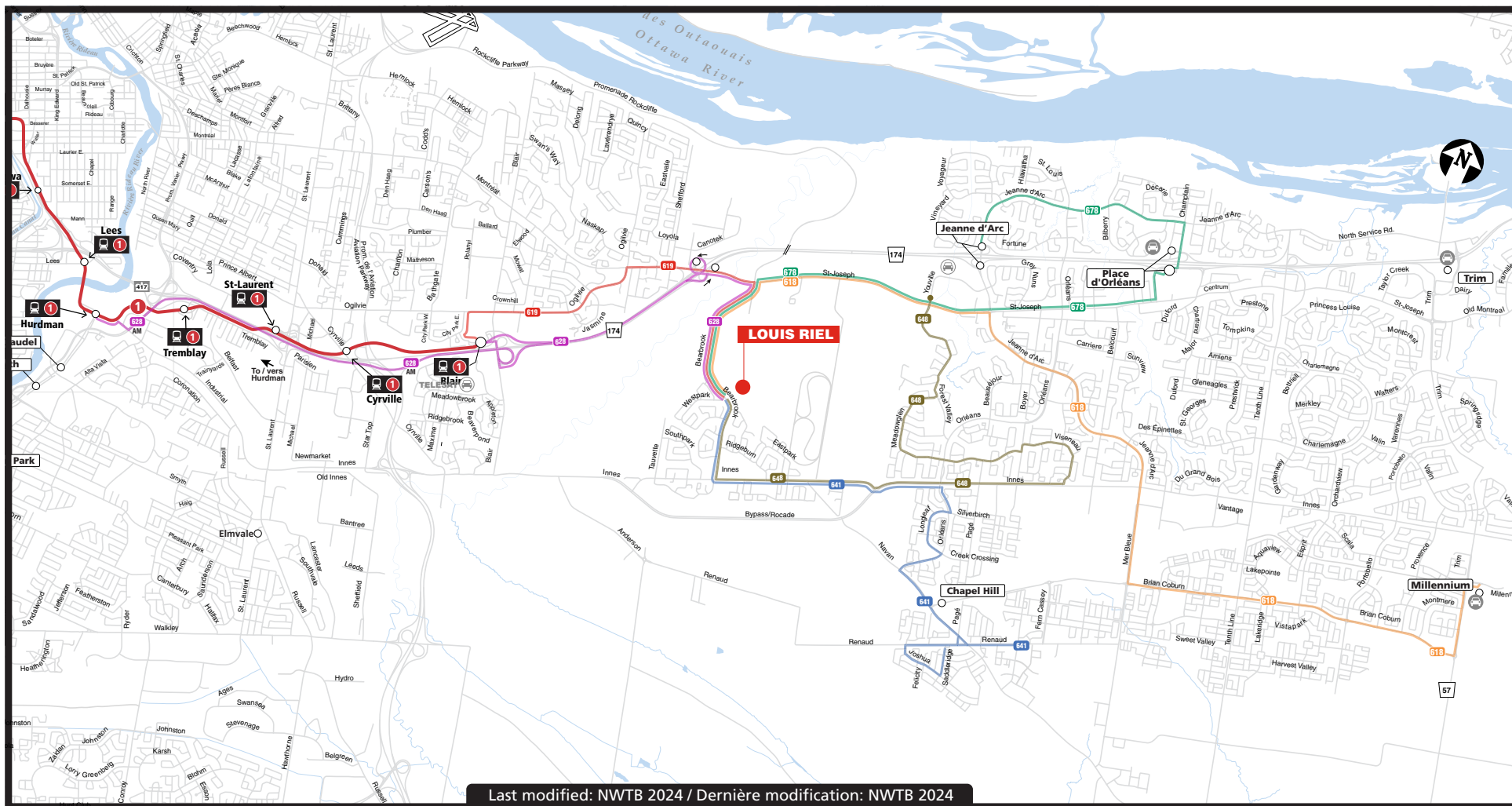
**Ce circuit sera mis en service le 27 avril 2025**, lorsque le réseau L'autobus réinventé entrera en vigueur.

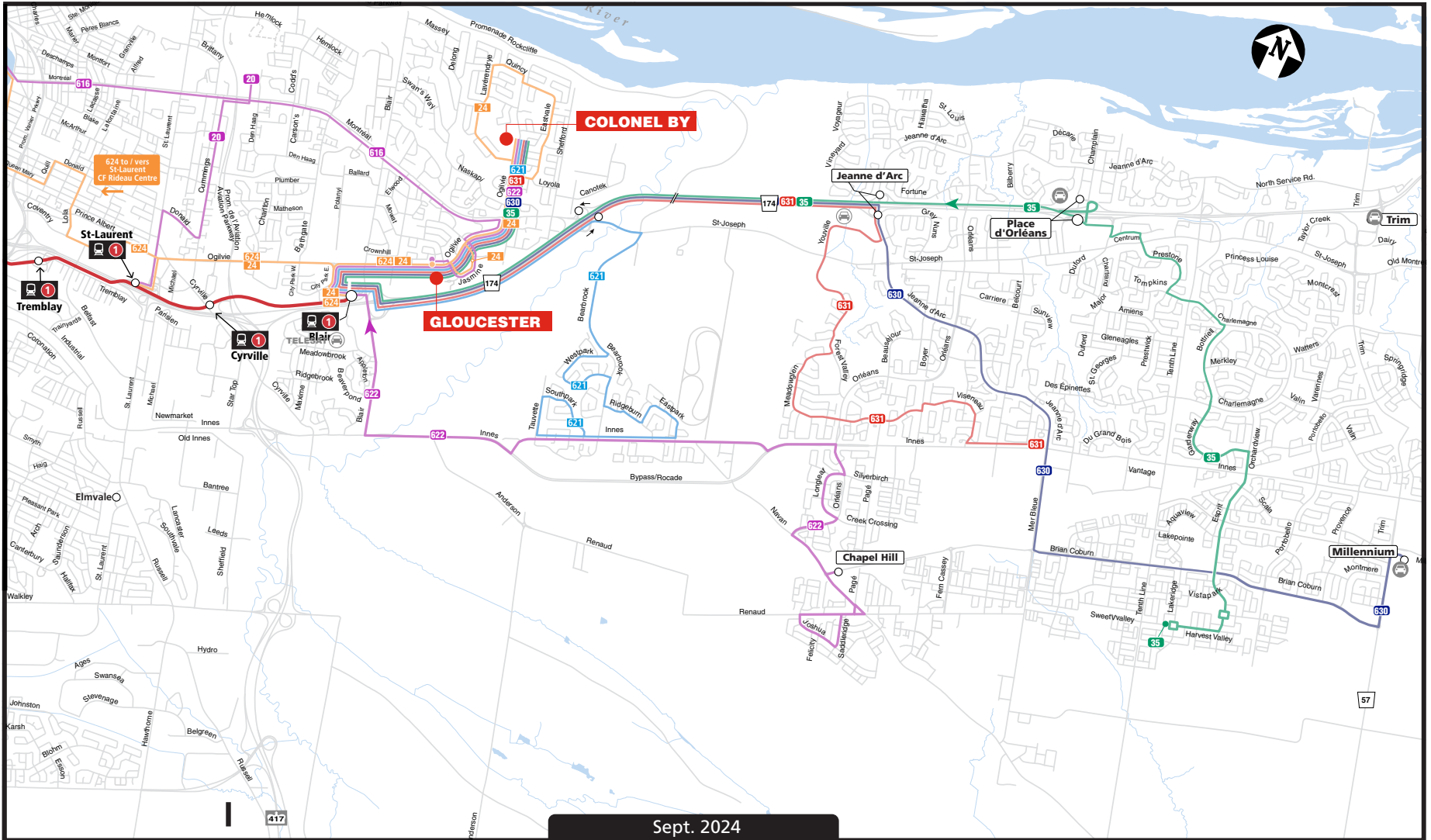
Customer Service /  
Service à la clientèle ..... **613-560-5000**

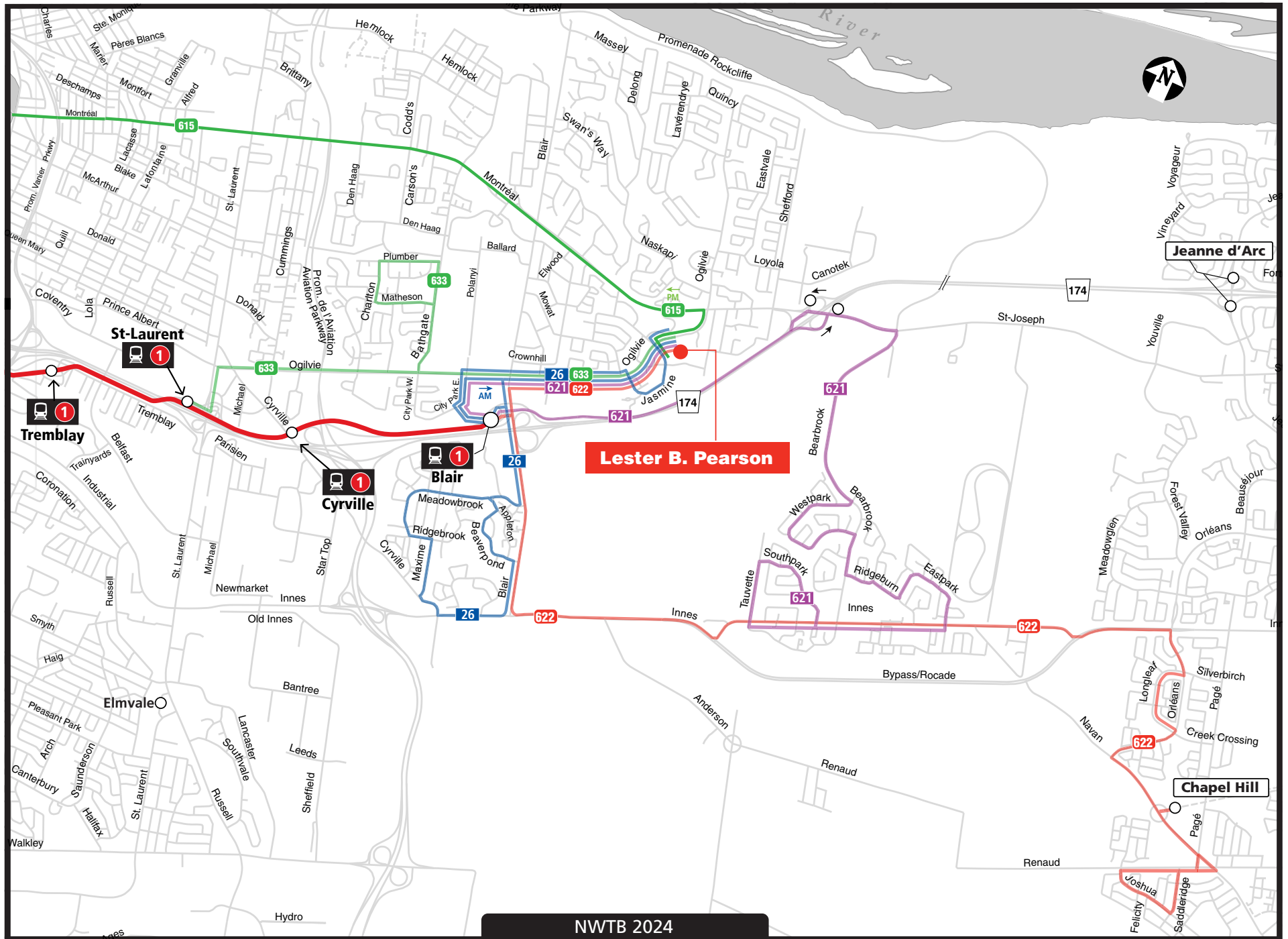
Security / Sécurité ..... **613-741-2478**

**Transpo**

**octranspo.com**







## **APPENDIX D**

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### Traffic Count Data

## Turning Movement Count - Peak Hour Diagram

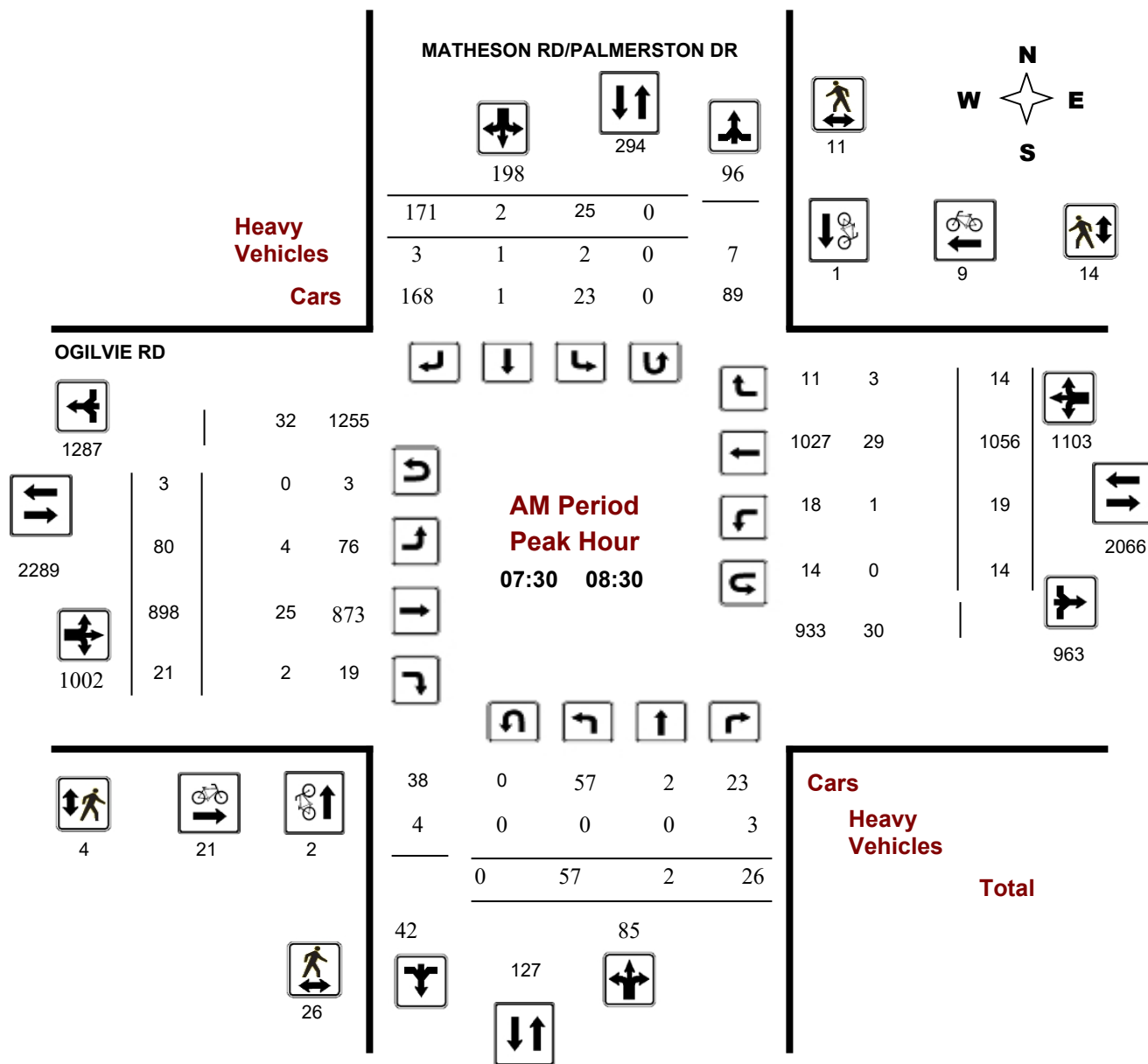
### OGILVIE RD @ MATHESON RD/PALMERSTON DR

**Survey Date:** Tuesday, May 09, 2017

**Start Time:** 07:00

**WO No:** 37015

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

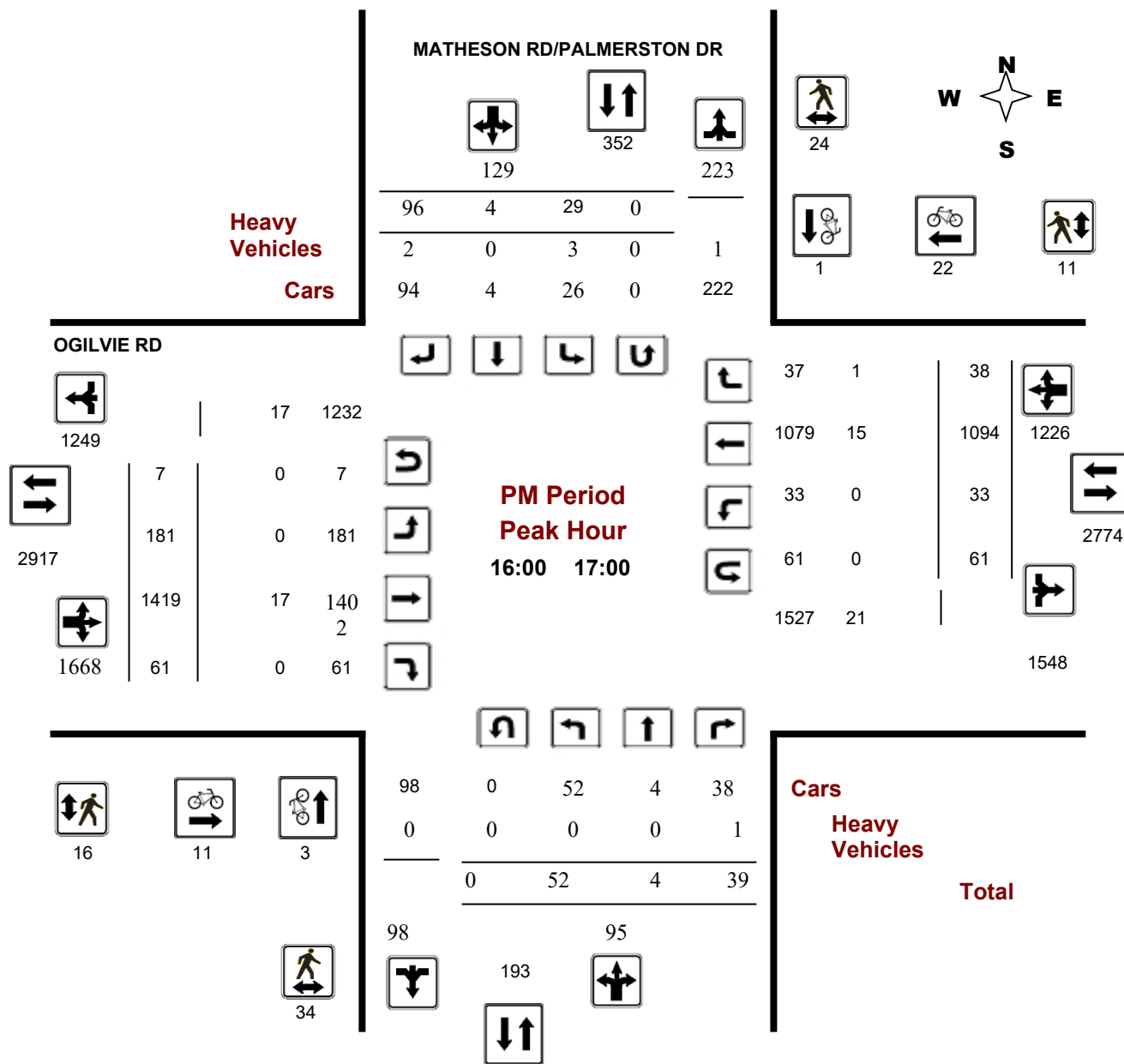
### OGILVIE RD @ MATHESON RD/PALMERSTON DR

**Survey Date:** Tuesday, May 09, 2017

**Start Time:** 07:00

**WO No:** 37015

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

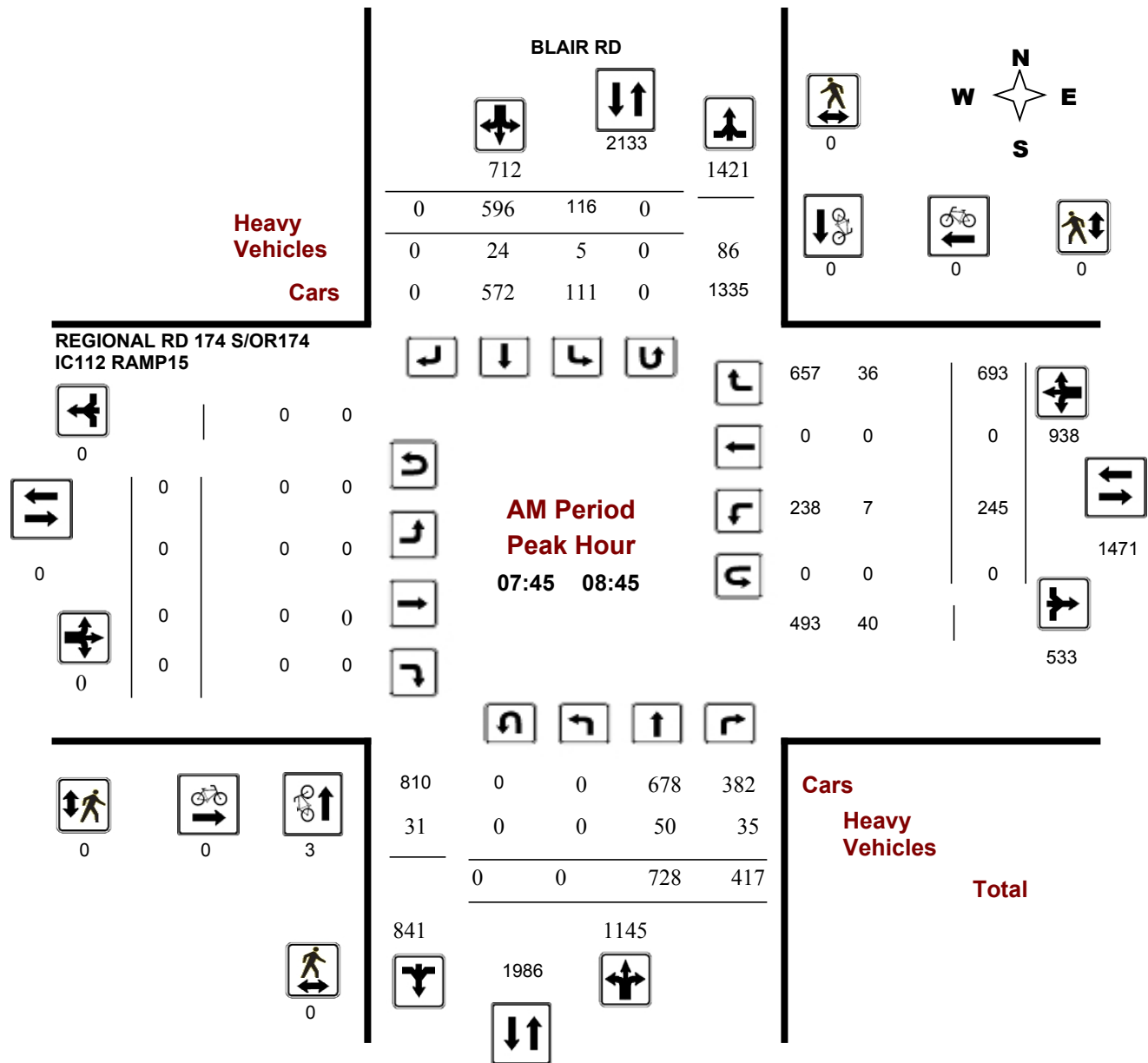
**BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15**

**Survey Date:** Tuesday, April 11, 2017

**Start Time:** 07:00

**WO No:** 36893

**Device:** Miovision



## Comments

## Turning Movement Count - Peak Hour Diagram

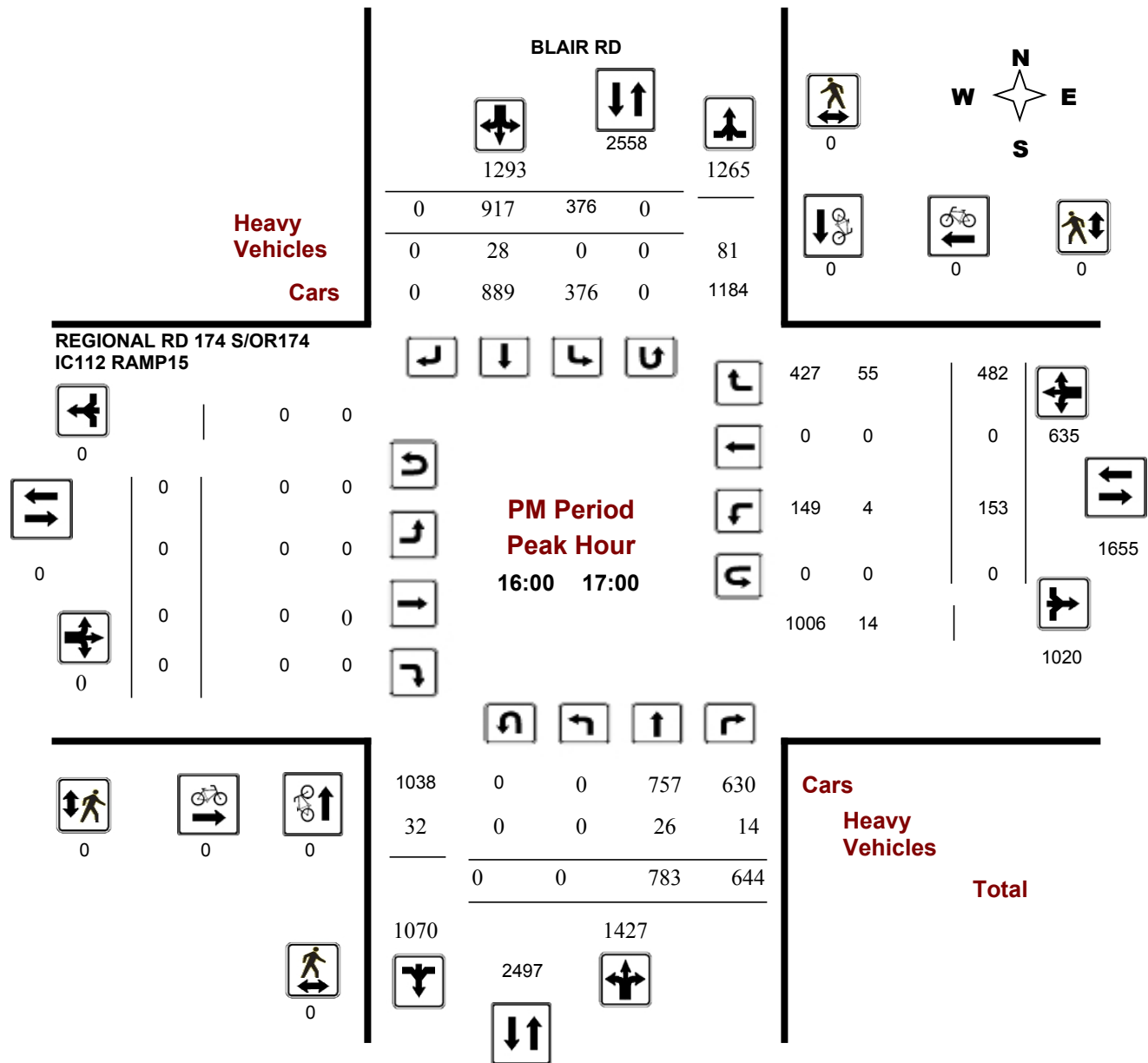
**BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15**

**Survey Date:** Tuesday, April 11, 2017

**Start Time:** 07:00

**WO No:** 36893

**Device:** Miovision



## Comments



# Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams All Vehicles Except Bicycles



## Blair Road & Ottawa Road 174 E/B Off Ramps

Gloucester, ON

### All Vehicles

(Except Bicycles & Electric Scooters)

Wednesday, March 22, 2023

0700-1000, 1130-1330 & 1500-1800

8 Hour Survey

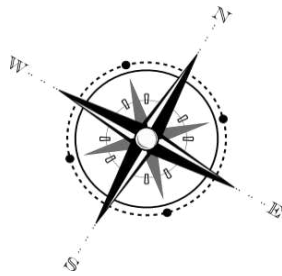
City of Ottawa Ward 11

Ottawa Rd. 174 E/B Off

Total vehicle volume,  
all approaches.  
(A + C + D)

RIGHT TURN RAMP.  
Includes 10 vehicles turning  
from traffic signal.

19259



### All Pedestrian Crossings

No Pedestrian  
Crossings  
Observed



### AM Peak Hour Flow Diagram

### PM Peak Hour Flow Diagram

Blair Rd.

Blair Rd.

Blair Rd.

Blair Rd.

Total vehicle  
volume, all  
approaches.  
(A + C + D)

Total vehicle  
volume, all  
approaches.  
(A + C + D)



Pedestrian Crossings  
During AM Peak Hr.  
N/A + 0  
0

Pedestrian Crossings  
During PM Peak Hr.  
N/A + 0  
0

Ottawa Rd. 174 E/B Off

Ottawa Rd. 174 E/B Off

| Summary - AM Peak Hr. |           |
|-----------------------|-----------|
| Peak Hr.              | 0800-0900 |
| Volume                | 2479      |
| PHF                   | 0.97      |

| Summary - PM Peak Hr. |           |
|-----------------------|-----------|
| Peak Hr.              | 1600-1700 |
| Volume                | 3204      |
| PHF                   | 0.99      |

## Turning Movement Count - Peak Hour Diagram

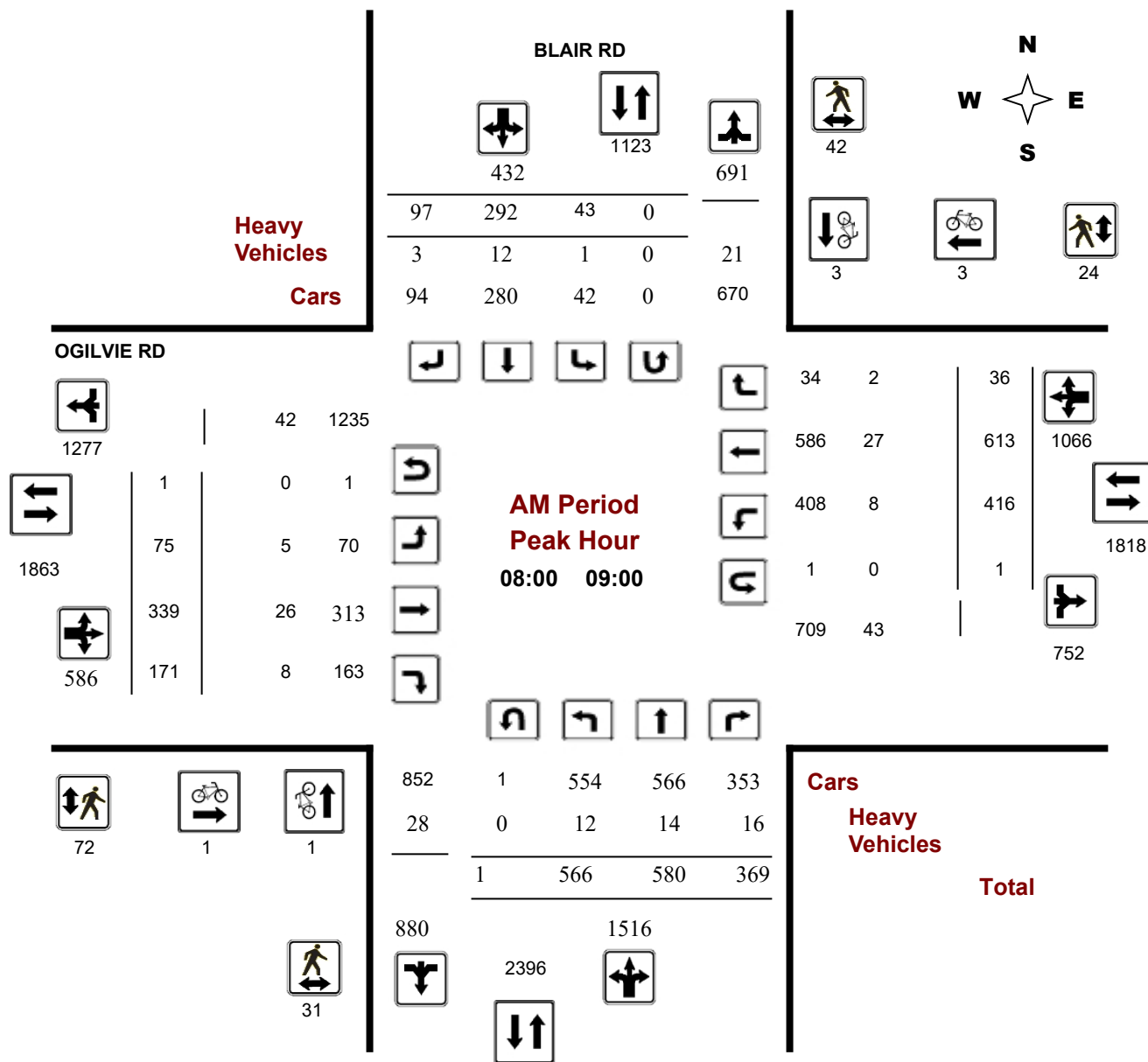
### BLAIR RD @ OGILVIE RD

**Survey Date:** Wednesday, April 24, 2019

**Start Time:** 07:00

**WO No:** 38576

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

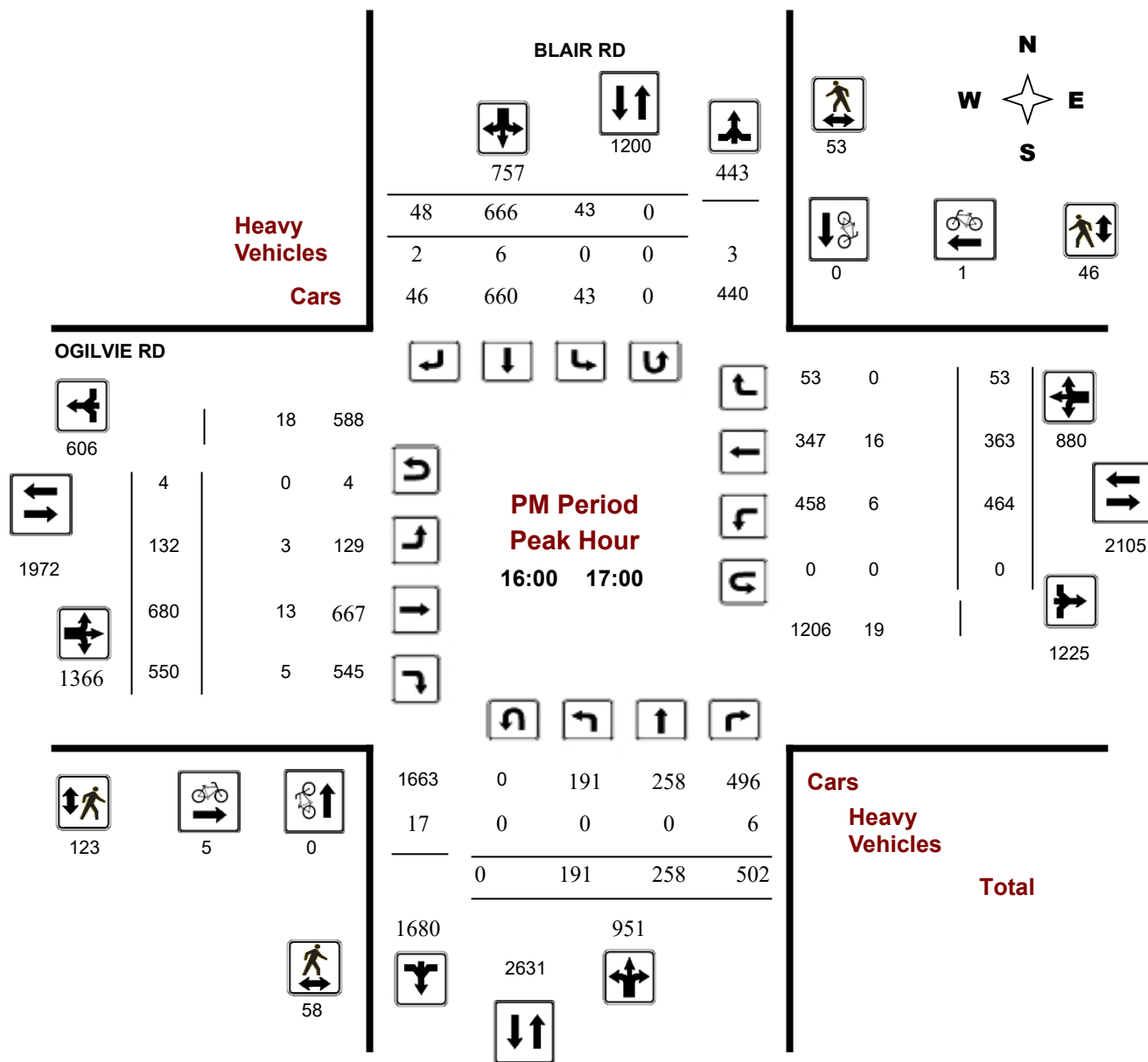
### BLAIR RD @ OGILVIE RD

**Survey Date:** Wednesday, April 24, 2019

**Start Time:** 07:00

**WO No:** 38576

**Device:** Miovision





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

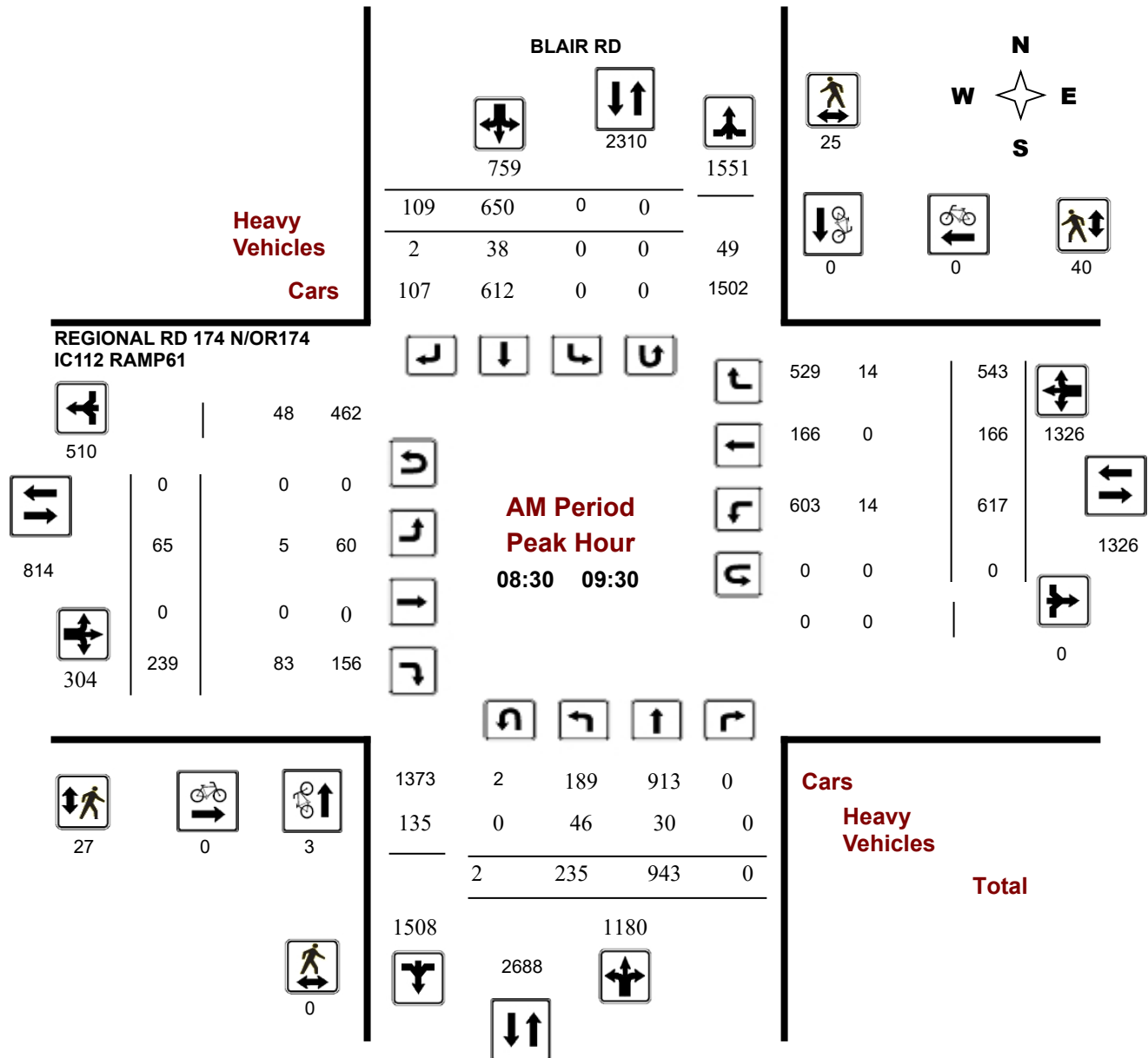
### BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Survey Date:** Wednesday, January 09, 2019

**Start Time:** 07:00

**WO No:** 38232

**Device:** Miovision





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

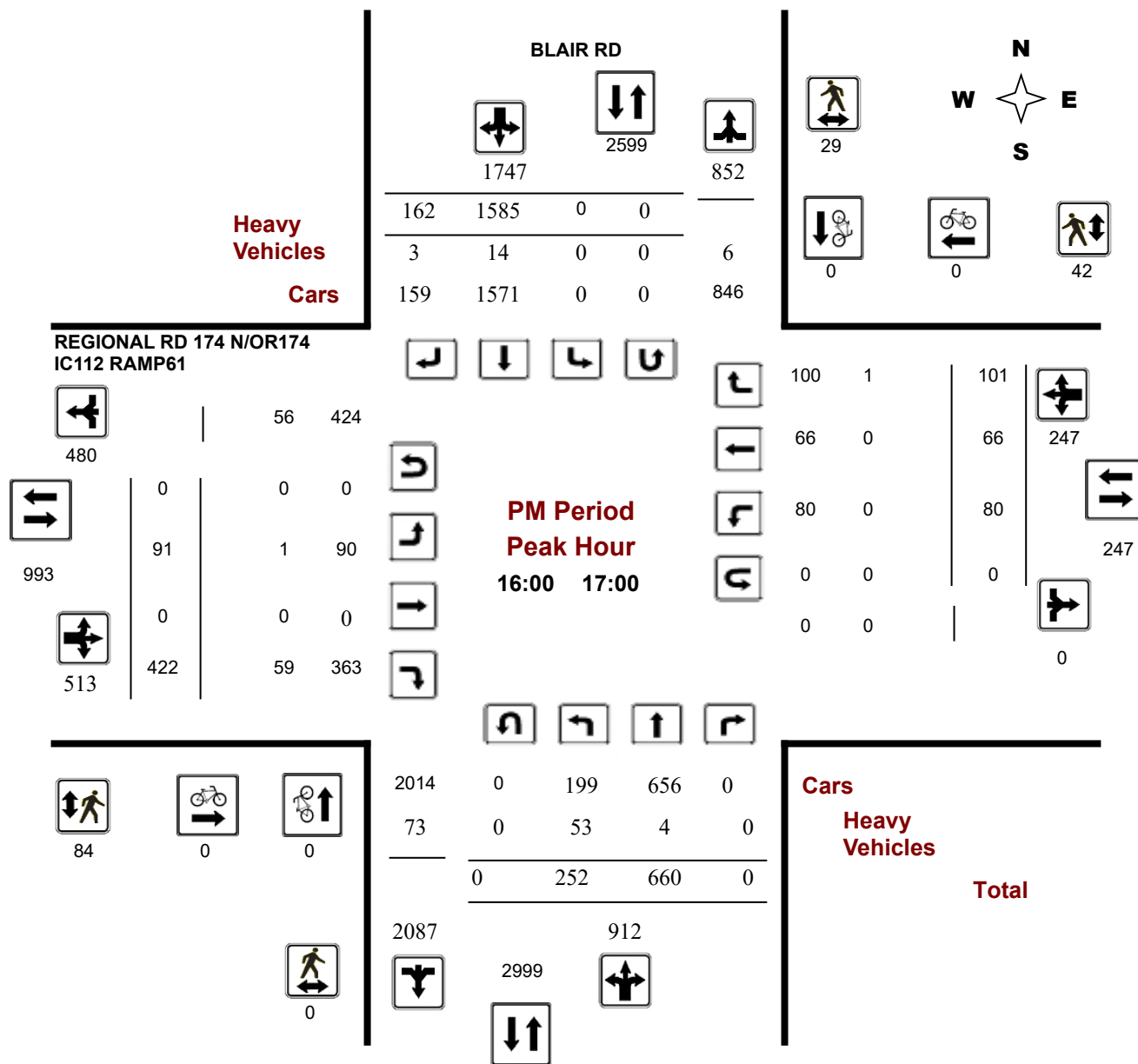
### BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Survey Date:** Wednesday, January 09, 2019

**Start Time:** 07:00

**WO No:** 38232

**Device:** Miovision





# Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams All Vehicles Except Bicycles



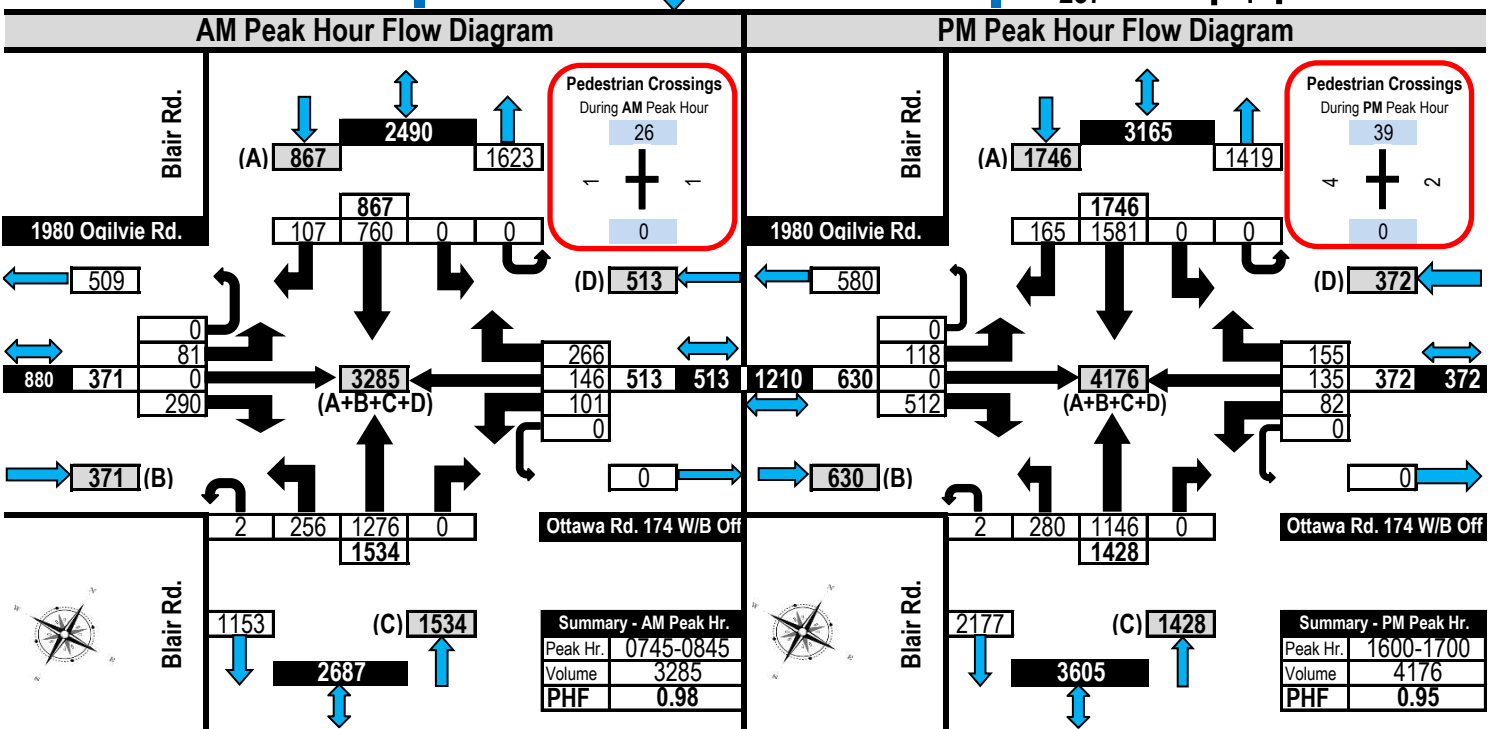
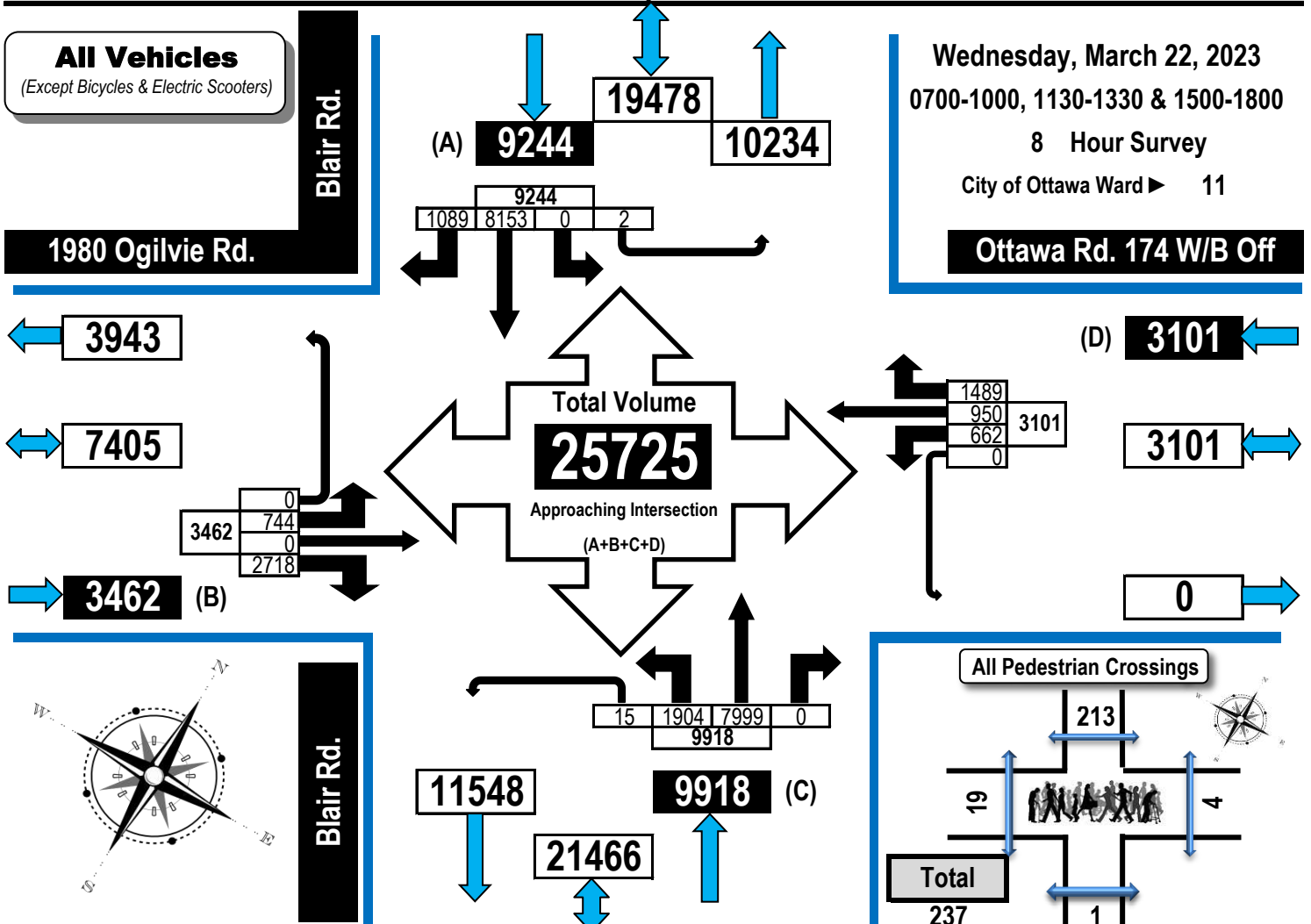
Blair Road & Ottawa Road 174 W/B Off Ramp

Gloucester, ON

**All Vehicles**  
(Except Bicycles & Electric Scooters)

Wednesday, March 22, 2023  
0700-1000, 1130-1330 & 1500-1800  
8 Hour Survey  
City of Ottawa Ward 11

Ottawa Rd. 174 W/B Off



## Turning Movement Count - Peak Hour Diagram

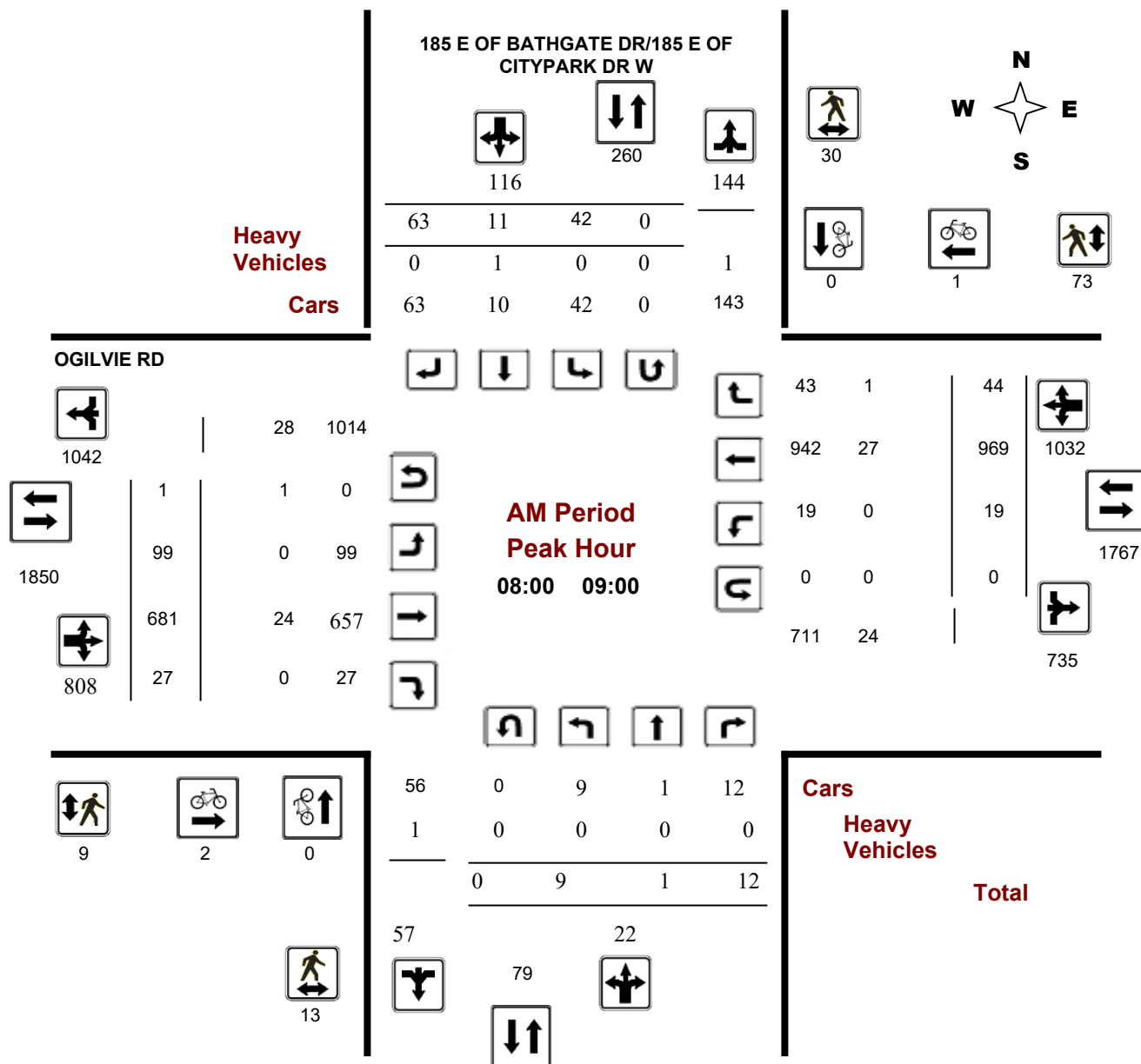
### OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

**Survey Date:** Wednesday, January 16, 2019

**Start Time:** 07:00

**WO No:** 38348

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

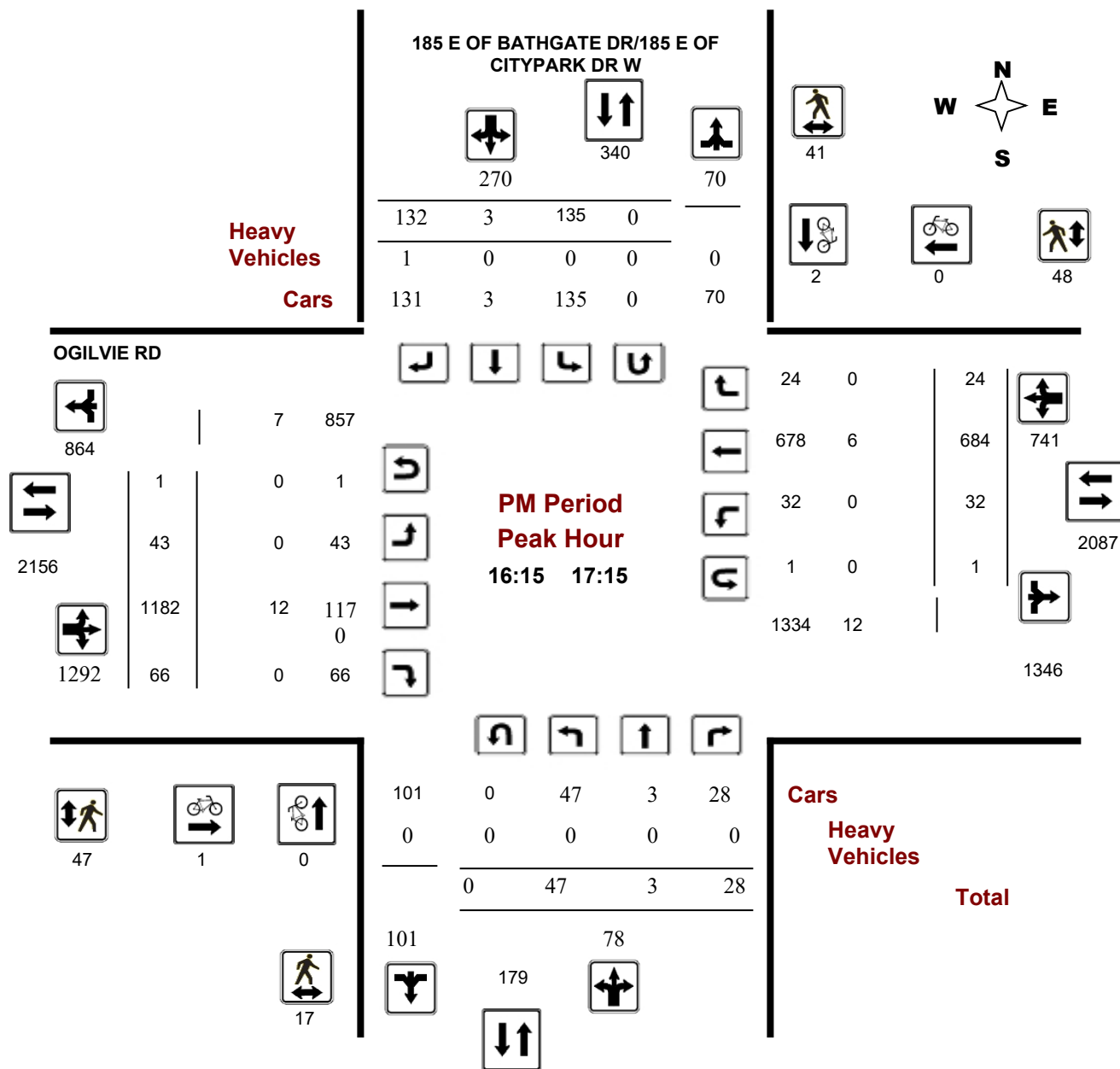
### OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

**Survey Date:** Wednesday, January 16, 2019

**Start Time:** 07:00

**WO No:** 38348

**Device:** Miovision



**Comments**



# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

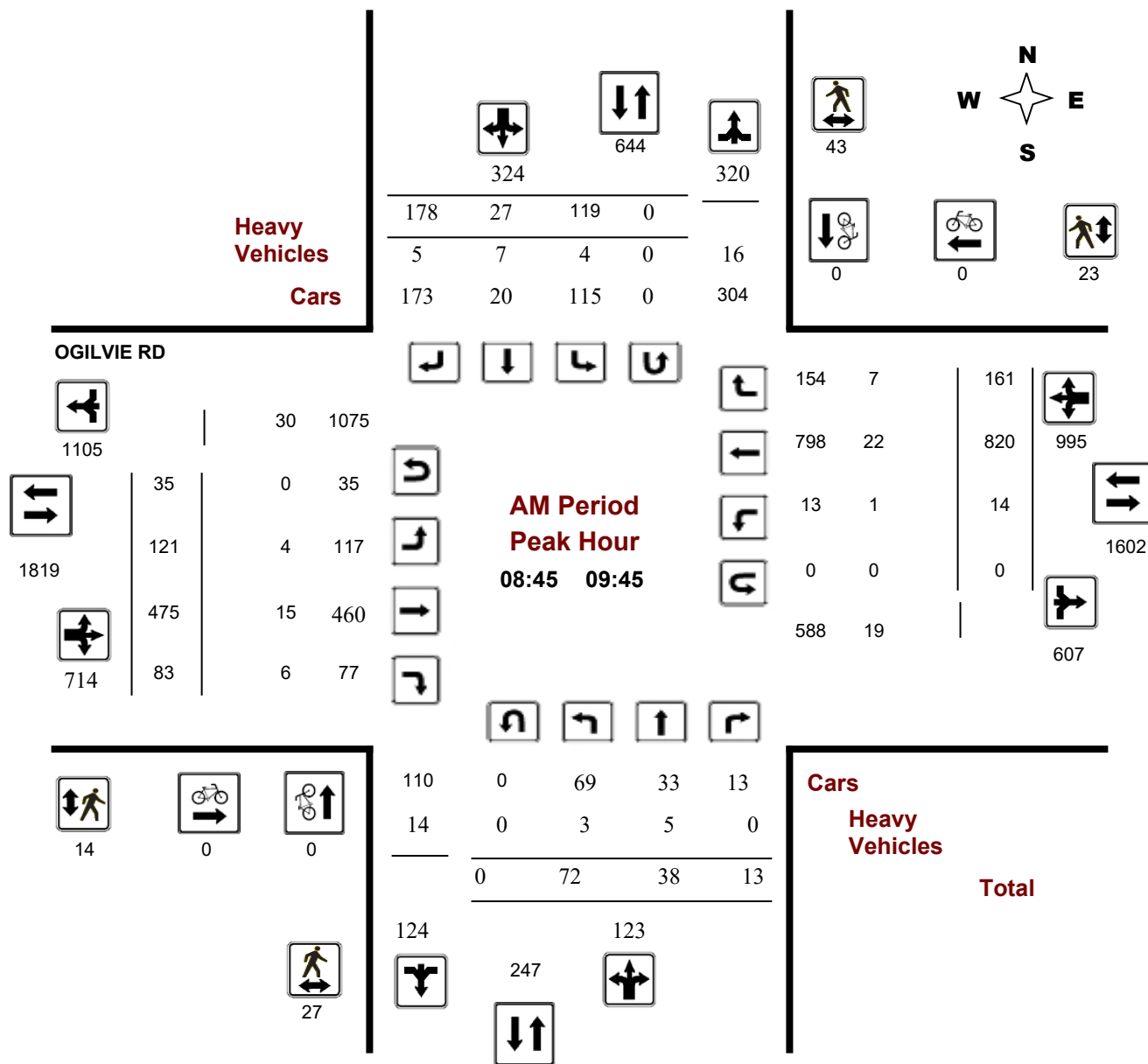
### OGILVIE RD @ BATHGATE DR/CITYPARK DR W

**Survey Date:** Monday, February 10, 2020

**Start Time:** 07:00

**WO No:** 39454

**Device:** Miovision



**Comments**

## Turning Movement Count - Peak Hour Diagram

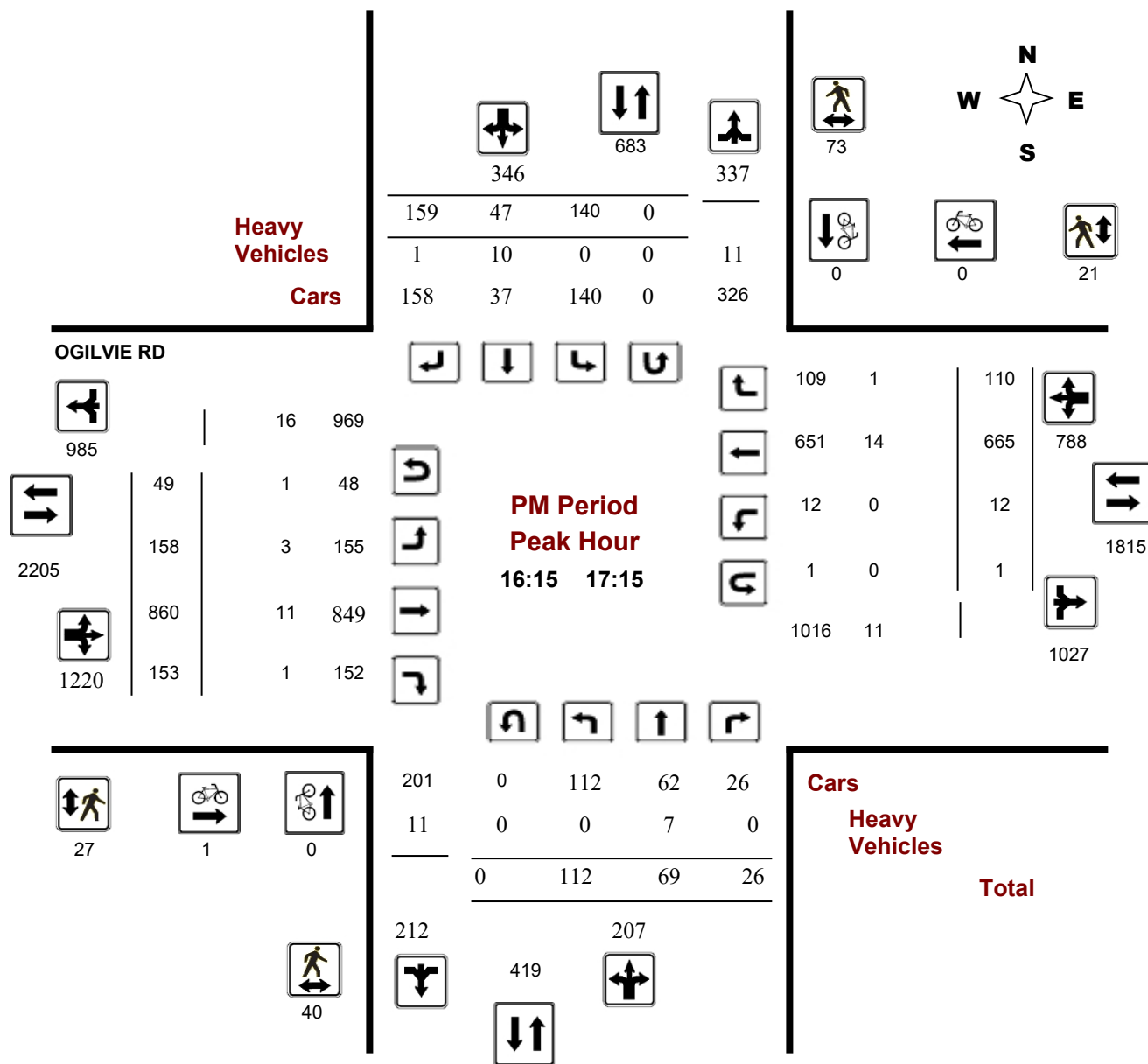
### OGILVIE RD @ BATHGATE DR/CITYPARK DR W

**Survey Date:** Monday, February 10, 2020

**Start Time:** 07:00

**WO No:** 39454

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

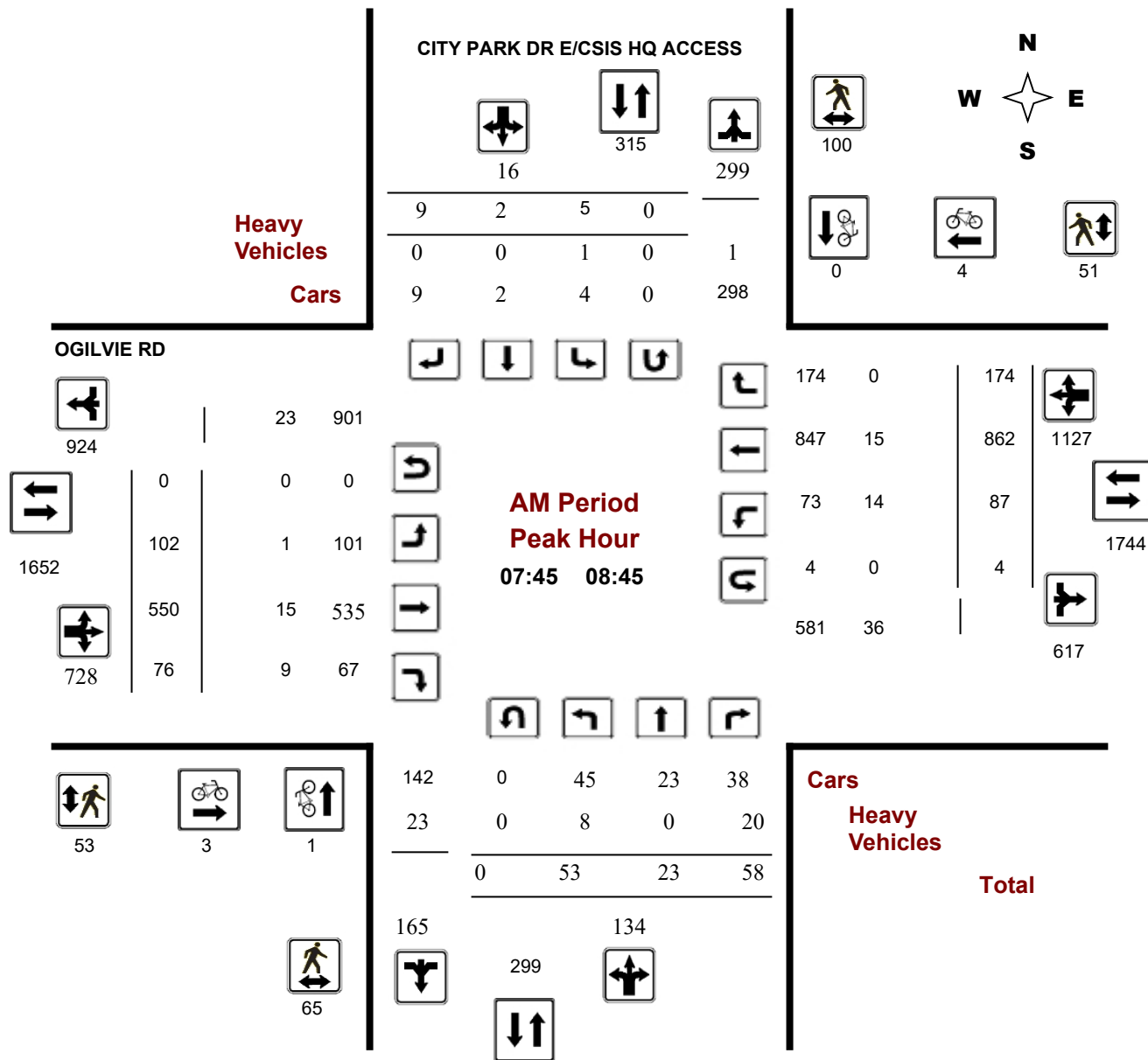
### OGILVIE RD @ CITY PARK DR E/CSIS HQ ACCESS

**Survey Date:** Wednesday, January 09, 2019

**Start Time:** 07:00

**WO No:** 38237

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

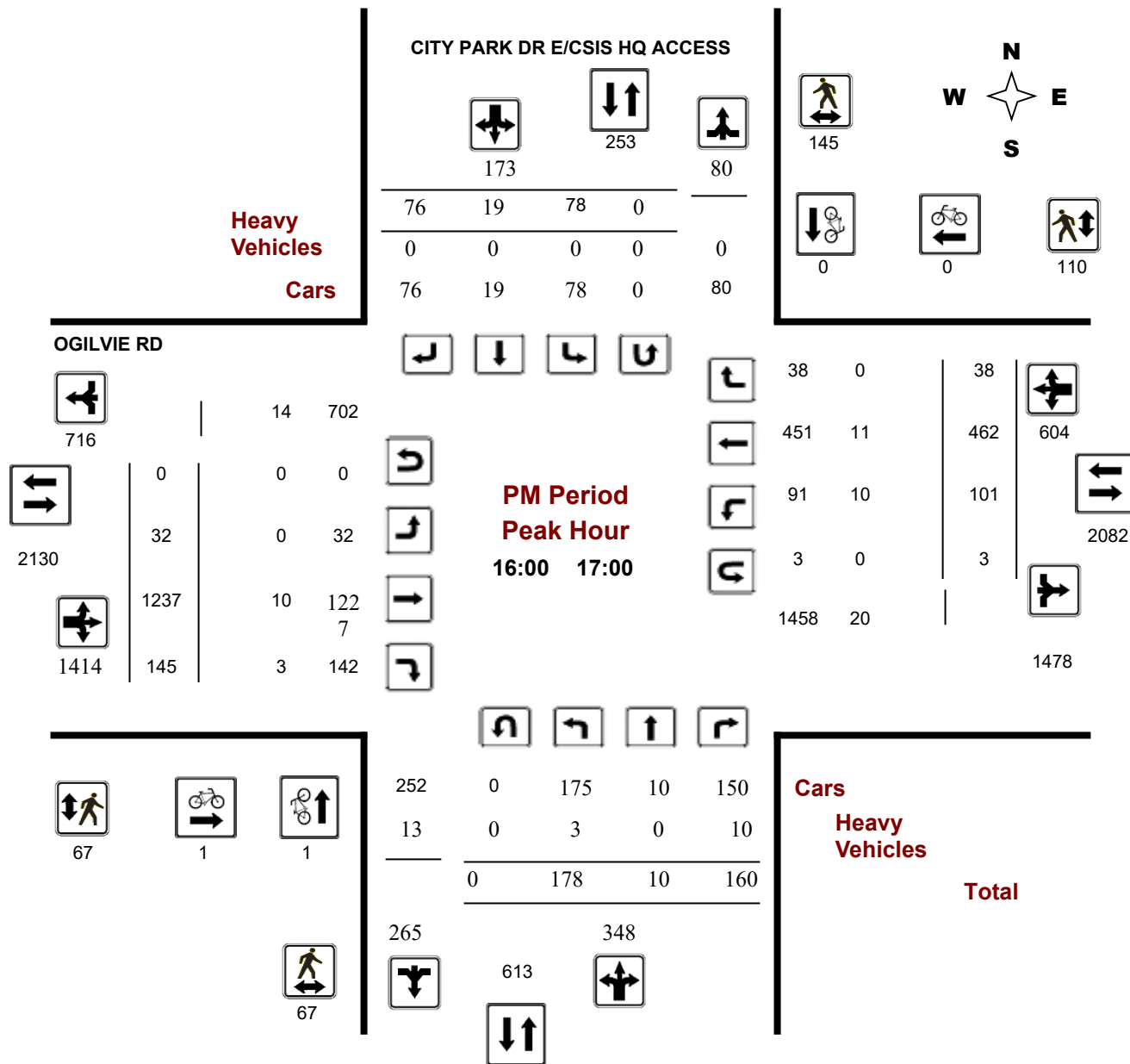
### OGILVIE RD @ CITY PARK DR E/CSIS HQ ACCESS

**Survey Date:** Wednesday, January 09, 2019

**Start Time:** 07:00

**WO No:** 38237

**Device:** Miovision



## **APPENDIX E**

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### Collision Records

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** AMBASSADOR AVE @ CITY PARK DR

**Traffic Control:** Stop sign

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2017-Nov-02, Thu,18:56 | Rain        | Angle       | P.D. only        | Wet            | North    | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Turning left      | Automobile, station wagon | Other motor vehicle |         |
| 2018-Oct-31, Wed,17:11 | Rain        | Rear end    | Non-fatal injury | Wet            | South    | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped           | Automobile, station wagon | Other motor vehicle |         |

**Location:** BLAIR RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 84

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Jan-12, Tue,18:26 | Clear       | Rear end    | P.D. only        | Wet            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped             | Pick-up truck             | Other motor vehicle |         |
| 2016-Feb-07, Sun,13:34 | Clear       | Rear end    | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Stopped             | Passenger van             | Other motor vehicle |         |
| 2016-Feb-12, Fri,17:15 | Snow        | Rear end    | P.D. only        | Loose snow     | South    | Unknown             | Unknown                   | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | Pick-up truck             | Other motor vehicle |         |
| 2016-May-03, Tue,08:59 | Clear       | Rear end    | P.D. only        | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2016-May-12, Thu,16:34 | Clear       | Sideswipe   | P.D. only        | Dry            | East     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2016-Jun-09, Thu,06:35 | Clear       | SMV other   | Non-fatal injury | Dry            | South    | Turning left        | Motorcycle                | Skidding/sliding    | 0       |
| 2016-Jul-22, Fri,14:29 | Clear       | Rear end    | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Stopped             | Pick-up truck             | Other motor vehicle |         |
| 2016-Aug-02, Tue,21:37 | Clear       | Rear end    | P.D. only        | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | Pick-up truck             | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 84

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Aug-12, Fri,16:16 | Clear       | Rear end    | P.D. only        | Wet            | North    | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Stopped           | Pick-up truck             | Other motor vehicle |         |
|                        |             |             |                  |                | North    | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2016-Sep-10, Sat,17:02 | Clear       | Rear end    | P.D. only        | Dry            | South    | Turning right     | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Turning right     | Automobile, station wagon | Other motor vehicle |         |
| 2016-Sep-19, Mon,07:32 | Clear       | Rear end    | P.D. only        | Dry            | North    | Going ahead       | Unknown                   | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2016-Dec-14, Wed,14:25 | Clear       | Rear end    | P.D. only        | Slush          | South    | Turning right     | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Turning right     | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jan-06, Fri,15:05 | Clear       | Sideswipe   | P.D. only        | Loose snow     | South    | Overtaking        | Delivery van              | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Going ahead       | Pick-up truck             | Other motor vehicle |         |
| 2017-Jan-19, Thu,17:36 | Clear       | Rear end    | P.D. only        | Wet            | West     | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Turning left      | Automobile, station wagon | Other motor vehicle |         |
| 2017-Feb-02, Thu,17:08 | Clear       | Rear end    | P.D. only        | Dry            | East     | Going ahead       | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2017-Apr-04, Tue,11:34 | Rain        | Sideswipe   | P.D. only        | Wet            | West     | Overtaking        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Turning left      | Pick-up truck             | Other motor vehicle |         |
| 2017-May-23, Tue,09:02 | Clear       | Rear end    | Non-fatal injury | Dry            | East     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | East     | Stopped           | Municipal transit bus     | Other motor vehicle |         |
| 2017-Aug-17, Thu,21:39 | Rain        | Rear end    | P.D. only        | Wet            | East     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 84

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2017-Sep-04, Mon,15:05 | Clear       | Rear end    | P.D. only      | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Sep-06, Wed,11:09 | Clear       | Rear end    | P.D. only      | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Sep-17, Sun,11:30 | Clear       | Rear end    | P.D. only      | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Oct-04, Wed,13:16 | Clear       | Other       | P.D. only      | Dry            | West     | Reversing           | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2017-Oct-27, Fri,11:57 | Clear       | Rear end    | P.D. only      | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Oct-30, Mon,09:29 | Rain        | Rear end    | P.D. only      | Wet            | North    | Going ahead         | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |             |                |                | North    | Stopped             | Tow truck                 | Other motor vehicle |         |
| 2017-Nov-21, Tue,15:59 | Clear       | Sideswipe   | P.D. only      | Dry            | West     | Turning left        | Passenger van             | Other motor vehicle | 0       |
|                        |             |             |                |                | West     | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2017-Nov-29, Wed,08:56 | Clear       | Rear end    | P.D. only      | Wet            | West     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | West     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                |                | West     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-05, Tue,20:15 | Rain        | Rear end    | P.D. only      | Wet            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-14, Thu,02:40 | Clear       | Sideswipe   | P.D. only      | Dry            | South    | Unknown             | Unknown                   | Other motor vehicle | 0       |
|                        |             |             |                |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-23, Sat,14:16 | Snow        | Rear end    | P.D. only      | Loose snow     | North    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 84

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2017-Dec-31, Sun,12:59 | Clear       | Rear end    | P.D. only        | Dry            | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Jan-14, Sun,17:28 | Clear       | Rear end    | P.D. only        | Dry            | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Jan-16, Tue,09:04 | Snow        | Rear end    | P.D. only        | Ice            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Feb-26, Mon,07:41 | Clear       | Rear end    | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2018-Mar-01, Thu,12:34 | Clear       | Rear end    | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Mar-08, Thu,18:34 | Snow        | Rear end    | P.D. only        | Wet            | West     | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Mar-27, Tue,20:10 | Rain        | Rear end    | P.D. only        | Wet            | West     | Unknown             | Passenger van             | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Apr-12, Thu,16:58 | Rain        | Rear end    | P.D. only        | Wet            | North    | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2018-May-15, Tue,20:45 | Clear       | Rear end    | Non-fatal injury | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-May-18, Fri,15:12 | Clear       | Sideswipe   | P.D. only        | Dry            | East     | Overtaking          | School bus                | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-May-25, Fri,11:30 | Clear       | Rear end    | P.D. only        | Dry            | East     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2018-May-30, Wed,16:23 | Clear       | Rear end    | Non-fatal injury | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 84

| Date/Day/Time          | Environment | Impact Type      | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|----------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2018-Jun-06, Wed,12:06 | Rain        | Rear end         | P.D. only      | Wet            | North    | Slowing or stopping | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                |                | North    | Stopped             | Pick-up truck             | Other motor vehicle |         |
| 2018-Jun-09, Sat,20:44 | Clear       | Rear end         | P.D. only      | Dry            | East     | Going ahead         | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                |                | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2018-Jun-12, Tue,19:08 | Clear       | Rear end         | P.D. only      | Dry            | West     | Going ahead         | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Jul-30, Mon,14:30 | Clear       | Rear end         | P.D. only      | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                |                | South    | Going ahead         | Ambulance                 | Other motor vehicle |         |
| 2018-Aug-17, Fri,07:29 | Clear       | Rear end         | P.D. only      | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                |                | North    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
|                        |             |                  |                |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Sep-14, Fri,19:04 | Clear       | Other            | P.D. only      | Dry            | North    | Reversing           | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Sep-23, Sun,12:41 | Clear       | Turning movement | P.D. only      | Dry            | West     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                |                | West     | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2018-Nov-14, Wed,13:13 | Clear       | Sideswipe        | P.D. only      | Dry            | North    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                |                | North    | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2018-Dec-12, Wed,08:13 | Clear       | Rear end         | P.D. only      | Wet            | North    | Slowing or stopping | Unknown                   | Other motor vehicle | 0       |
|                        |             |                  |                |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
|                        |             |                  |                |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
|                        |             |                  |                |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Dec-12, Wed,18:26 | Clear       | Rear end         | P.D. only      | Loose snow     | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                |                | North    | Unknown             | Unknown                   | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 84

| Date/Day/Time          | Environment   | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|---------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2018-Dec-30, Sun,17:20 | Clear         | Rear end    | P.D. only        | Ice            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2019-Apr-09, Tue,15:21 | Freezing Rain | Rear end    | Non-fatal injury | Slush          | West     | Stopped             | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-Jun-18, Tue,12:18 | Clear         | Rear end    | P.D. only        | Dry            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2019-Sep-30, Mon,15:52 | Clear         | Other       | P.D. only        | Dry            | East     | Turning right       | Passenger van             | Ran off road        | 0       |
|                        |               |             |                  |                | East     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2019-Nov-01, Fri,10:25 | Clear         | Angle       | Non-fatal injury | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-Dec-11, Wed,17:52 | Clear         | Rear end    | P.D. only        | Loose snow     | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2019-Dec-12, Thu,15:23 | Clear         | Sideswipe   | P.D. only        | Dry            | East     | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
|                        |               |             |                  |                | East     | Stopped             | Passenger van             | Other motor vehicle |         |
| 2020-Jan-15, Wed,17:45 | Clear         | Sideswipe   | P.D. only        | Wet            | North    | Changing lanes      | Pick-up truck             | Other motor vehicle | 0       |
|                        |               |             |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2020-Jan-30, Thu,11:50 | Clear         | Rear end    | P.D. only        | Dry            | East     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | East     | Turning right       | Pick-up truck             | Other motor vehicle |         |
| 2020-Feb-12, Wed,14:15 | Clear         | Rear end    | P.D. only        | Dry            | East     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | East     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2020-Feb-23, Sun,00:15 | Clear         | Sideswipe   | P.D. only        | Dry            | West     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | West     | Turning left        | Pick-up truck             | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 84

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2020-Feb-28, Fri,08:58 | Clear       | Rear end    | P.D. only      | Ice            | East     | Going ahead         | Passenger van             | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Going ahead         | Tow truck                 | Other motor vehicle |         |
| 2020-Mar-05, Thu,10:18 | Clear       | Rear end    | P.D. only      | Dry            | West     | Changing lanes      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |             |                |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2020-Mar-12, Thu,19:05 | Clear       | Rear end    | P.D. only      | Dry            | North    | Turning right       | Unknown                   | Other motor vehicle | 0       |
|                        |             |             |                |                | North    | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2020-Mar-16, Mon,16:24 | Clear       | Rear end    | P.D. only      | Dry            | North    | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | North    | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2020-May-26, Tue,15:15 | Clear       | Rear end    | P.D. only      | Dry            | North    | Turning right       | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |             |                |                | North    | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2020-Jun-26, Fri,06:15 | Clear       | Rear end    | P.D. only      | Dry            | East     | Slowing or stopping | Municipal transit bus     | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2020-Sep-13, Sun,20:10 | Clear       | Rear end    | P.D. only      | Dry            | East     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Turning right       | Pick-up truck             | Other motor vehicle |         |
| 2020-Sep-25, Fri,17:00 | Clear       | Rear end    | P.D. only      | Dry            | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | West     | Stopped             | Pick-up truck             | Other motor vehicle |         |
| 2020-Oct-07, Wed,14:10 | Clear       | Rear end    | P.D. only      | Dry            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2020-Oct-29, Thu,11:04 | Clear       | Rear end    | P.D. only      | Dry            | East     | Unknown             | Unknown                   | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2020-Nov-02, Mon,09:45 | Clear       | Rear end    | P.D. only      | Dry            | East     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Turning right       | Pick-up truck             | Other motor vehicle |         |
| 2020-Nov-03, Tue,14:43 | Clear       | Rear end    | P.D. only      | Dry            | West     | Turning left        | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |             |                |                | West     | Turning left        | Pick-up truck             | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 84

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuver   | Vehicle type              | First Event                | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|----------------------------|---------|
| 2020-Nov-08, Sun,16:40 | Clear       | Rear end    | P.D. only        | Dry            | North    | Turning right       | Pick-up truck             | Other motor vehicle        | 0       |
|                        |             |             |                  |                | North    | Turning right       | Pick-up truck             | Other motor vehicle        |         |
| 2020-Nov-17, Tue,13:24 | Rain        | Rear end    | Non-fatal injury | Wet            | North    | Slowing or stopping | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |             |                  |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle        |         |
| 2020-Nov-22, Sun,21:00 | Snow        | Rear end    | P.D. only        | Ice            | North    | Turning right       | Unknown                   | Other motor vehicle        | 0       |
|                        |             |             |                  |                | North    | Turning right       | Automobile, station wagon | Other motor vehicle        |         |
| 2020-Nov-25, Wed,07:25 | Snow        | Rear end    | P.D. only        | Ice            | North    | Going ahead         | Pick-up truck             | Other motor vehicle        | 0       |
|                        |             |             |                  |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle        |         |
| 2020-Nov-26, Thu,16:25 | Rain        | Rear end    | P.D. only        | Wet            | North    | Turning right       | Delivery van              | Other motor vehicle        | 0       |
|                        |             |             |                  |                | North    | Turning right       | Automobile, station wagon | Other motor vehicle        |         |
| 2020-Nov-30, Mon,12:30 | Clear       | Rear end    | P.D. only        | Dry            | South    | Unknown             | Unknown                   | Other motor vehicle        | 0       |
|                        |             |             |                  |                | South    | Stopped             | Pick-up truck             | Other motor vehicle        |         |
| 2020-Dec-09, Wed,17:45 | Clear       | Sideswipe   | P.D. only        | Dry            | West     | Changing lanes      | Pick-up truck             | Other motor vehicle        | 0       |
|                        |             |             |                  |                | West     | Going ahead         | Pick-up truck             | Other motor vehicle        |         |
| 2020-Dec-18, Fri,15:50 | Clear       | Sideswipe   | Non-fatal injury | Dry            | West     | Changing lanes      | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |             |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle        |         |
| 2020-Dec-20, Sun,05:24 | Clear       | SMV other   | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Pole (sign, parking meter) | 0       |
| 2020-Dec-29, Tue,10:36 | Clear       | Rear end    | Non-fatal injury | Dry            | North    | Turning right       | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |             |                  |                | North    | Turning right       | Automobile, station wagon | Other motor vehicle        |         |

**Location:** BLAIR RD @ OR174 IC112 RAMP26

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuver | Vehicle type              | First Event      | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|-------------------|---------------------------|------------------|---------|
| 2016-Nov-26, Sat,11:07 | Clear       | SMV other   | P.D. only      | Dry            | West     | Going ahead       | Automobile, station wagon | Steel guide rail | 0       |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ OR174 IC112 RAMP26

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2017-Aug-03, Thu,08:15 | Clear       | Rear end    | P.D. only      | Dry            | West     | Going ahead       | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |             |                |                | West     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                |                | West     | Stopped           | Automobile, station wagon | Other motor vehicle |         |

**Location:** BLAIR RD @ OR174 IC112 RAMP52

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Dec-08, Thu,17:12 | Snow        | Rear end    | Non-fatal injury | Loose snow     | North    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2019-Jun-07, Fri,12:00 | Clear       | Rear end    | P.D. only        | Dry            | North    | Merging             | Passenger van             | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Merging             | Passenger van             | Other motor vehicle |         |

**Location:** BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Traffic Control:** Traffic signal

**Total Collisions:** 66

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Feb-09, Tue,15:48 | Clear       | Turning movement | Non-fatal injury | Dry            | East     | Turning left      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2016-Apr-01, Fri,16:00 | Clear       | Rear end         | Non-fatal injury | Dry            | West     | Turning right     | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Turning right     | Automobile, station wagon | Other motor vehicle |         |
| 2016-May-17, Tue,10:47 | Clear       | Rear end         | P.D. only        | Dry            | East     | Turning right     | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Turning right     | Pick-up truck             | Other motor vehicle |         |
| 2016-Jun-29, Wed,08:52 | Clear       | Angle            | Non-fatal injury | Dry            | West     | Going ahead       | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2016-Sep-10, Sat,23:18 | Rain        | Turning movement | P.D. only        | Wet            | South    | Going ahead       | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Turning left      | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Traffic Control:** Traffic signal

**Total Collisions:** 66

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Sep-19, Mon,19:42 | Clear       | Sideswipe        | P.D. only        | Dry            | East     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Turning right       | Pick-up truck             | Other motor vehicle |         |
| 2016-Sep-23, Fri,07:30 | Rain        | Rear end         | P.D. only        | Wet            | West     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2016-Oct-22, Sat,00:33 | Rain        | Rear end         | Non-fatal injury | Wet            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2016-Nov-14, Mon,14:08 | Clear       | Rear end         | P.D. only        | Dry            | West     | Changing lanes      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Pick-up truck             | Other motor vehicle |         |
| 2016-Nov-21, Mon,09:10 | Snow        | Rear end         | P.D. only        | Slush          | West     | Slowing or stopping | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jan-06, Fri,14:40 | Clear       | Turning movement | P.D. only        | Wet            | East     | Turning left        | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jan-19, Thu,14:56 | Clear       | Rear end         | P.D. only        | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Pick-up truck             | Other motor vehicle |         |
| 2017-Jan-21, Sat,18:24 | Clear       | Rear end         | P.D. only        | Wet            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
|                        |             |                  |                  |                | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2017-Feb-04, Sat,18:10 | Clear       | Sideswipe        | P.D. only        | Dry            | South    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Mar-18, Sat,10:00 | Clear       | Rear end         | Non-fatal injury | Dry            | South    | Turning right       | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2017-Mar-18, Sat,21:47 | Clear       | Turning movement | P.D. only        | Dry            | West     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Turning right       | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Traffic Control:** Traffic signal

**Total Collisions:** 66

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2017-Apr-03, Mon,07:46 | Clear       | Rear end         | P.D. only        | Dry            | West     | Unknown             | Unknown                   | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Apr-15, Sat,17:08 | Rain        | Turning movement | P.D. only        | Wet            | South    | Going ahead         | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Turning left        | Municipal transit bus     | Other motor vehicle |         |
| 2017-May-04, Thu,21:21 | Rain        | Turning movement | P.D. only        | Wet            | East     | Turning left        | Unknown                   | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead         | Pick-up truck             | Other motor vehicle |         |
| 2017-May-14, Sun,11:00 | Rain        | Rear end         | Non-fatal injury | Wet            | South    | Going ahead         | Unknown                   | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-May-18, Thu,07:40 | Clear       | Rear end         | P.D. only        | Dry            | West     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Turning right       | Pick-up truck             | Other motor vehicle |         |
| 2017-May-24, Wed,10:30 | Clear       | Turning movement | Non-fatal injury | Dry            | South    | Going ahead         | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Turning left        | Passenger van             | Other motor vehicle |         |
| 2017-May-24, Wed,21:22 | Clear       | Angle            | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jun-07, Wed,20:01 | Clear       | Sideswipe        | P.D. only        | Dry            | North    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jun-14, Wed,13:58 | Clear       | Rear end         | P.D. only        | Dry            | West     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jul-18, Tue,08:08 | Clear       | Rear end         | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Aug-04, Fri,15:48 | Clear       | Rear end         | P.D. only        | Dry            | North    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Slowing or stopping | Pick-up truck             | Other motor vehicle |         |
|                        |             |                  |                  |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Traffic Control:** Traffic signal

**Total Collisions:** 66

| Date/Day/Time          | Environment   | Impact Type      | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|---------------|------------------|----------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2017-Aug-11, Fri,00:40 | Clear         | Turning movement | P.D. only      | Dry            | East     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Oct-04, Wed,12:26 | Clear         | Rear end         | P.D. only      | Dry            | South    | Going ahead         | Passenger van             | Other motor vehicle | 0       |
|                        |               |                  |                |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Oct-16, Mon,08:26 | Clear         | Rear end         | P.D. only      | Dry            | West     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | West     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2017-Nov-07, Tue,07:45 | Clear         | Rear end         | P.D. only      | Dry            | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | West     | Slowing or stopping | Passenger van             | Other motor vehicle |         |
| 2018-Mar-06, Tue,10:13 | Clear         | Angle            | P.D. only      | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Mar-22, Thu,10:57 | Clear         | Angle            | P.D. only      | Dry            | West     | Turning right       | Bus (other)               | Other motor vehicle | 0       |
|                        |               |                  |                |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Mar-28, Wed,11:24 | Clear         | Angle            | P.D. only      | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Apr-16, Mon,16:09 | Freezing Rain | Turning movement | P.D. only      | Ice            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | North    | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2018-May-29, Tue,18:34 | Clear         | Rear end         | P.D. only      | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Jul-14, Sat,21:44 | Clear         | Angle            | P.D. only      | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Aug-14, Tue,19:12 | Clear         | Sideswipe        | P.D. only      | Dry            | South    | Overtaking          | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | South    | Merging             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Sep-05, Wed,11:48 | Clear         | Rear end         | P.D. only      | Dry            | North    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Traffic Control:** Traffic signal

**Total Collisions:** 66

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2018-Sep-21, Fri,07:00 | Rain        | Rear end    | P.D. only        | Wet            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Going ahead         | Passenger van             | Other motor vehicle |         |
| 2018-Oct-25, Thu,07:13 | Clear       | Rear end    | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Nov-01, Thu,21:38 | Rain        | SMV other   | Non-fatal injury | Wet            | East     | Turning left        | Automobile, station wagon | Pedestrian          | 1       |
| 2018-Nov-20, Tue,08:52 | Snow        | Rear end    | P.D. only        | Loose snow     | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | School bus                | Other motor vehicle |         |
| 2019-Jan-18, Fri,06:25 | Snow        | Rear end    | Non-fatal injury | Wet            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2019-Jan-24, Thu,17:00 | Clear       | Rear end    | P.D. only        | Packed snow    | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2019-Jan-29, Tue,09:08 | Snow        | Rear end    | P.D. only        | Loose snow     | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | South    | Slowing or stopping | Automobile, station wagon | Snowbank/drift      |         |
| 2019-Mar-21, Thu,07:00 | Clear       | Rear end    | P.D. only        | Dry            | West     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2019-May-04, Sat,13:25 | Clear       | Sideswipe   | P.D. only        | Dry            | South    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-May-08, Wed,09:30 | Clear       | Rear end    | P.D. only        | Dry            | West     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2019-Jul-11, Thu,18:00 | Clear       | Angle       | P.D. only        | Dry            | North    | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Traffic Control:** Traffic signal

**Total Collisions:** 66

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2019-Aug-06, Tue,09:14 | Clear       | Rear end         | P.D. only        | Dry            | West     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2019-Aug-06, Tue,14:51 | Rain        | Rear end         | P.D. only        | Wet            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2019-Aug-16, Fri,07:53 | Clear       | Rear end         | P.D. only        | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Delivery van              | Other motor vehicle |         |
| 2019-Aug-25, Sun,12:50 | Clear       | Rear end         | P.D. only        | Dry            | South    | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2019-Nov-27, Wed,17:38 | Rain        | Turning movement | Non-fatal injury | Wet            | East     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-Dec-03, Tue,10:12 | Clear       | Angle            | Non-fatal injury | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead         | Passenger van             | Other motor vehicle |         |
| 2020-Jan-20, Mon,17:57 | Clear       | Rear end         | P.D. only        | Ice            | South    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Changing lanes      | Pick-up truck             | Other motor vehicle |         |
| 2020-Jan-21, Tue,13:20 | Clear       | Rear end         | P.D. only        | Wet            | South    | Slowing or stopping | Delivery van              | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2020-Feb-05, Wed,15:05 | Clear       | Rear end         | P.D. only        | Dry            | South    | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Turning right       | Pick-up truck             | Other motor vehicle |         |
| 2020-Feb-12, Wed,09:30 | Clear       | Rear end         | Non-fatal injury | Dry            | West     | Turning right       | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Turning right       | Pick-up truck             | Other motor vehicle |         |
| 2020-Jun-20, Sat,19:48 | Clear       | Angle            | P.D. only        | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Truck-other               | Other motor vehicle |         |
| 2020-Jul-08, Wed,19:44 | Clear       | Other            | P.D. only        | Dry            | East     | Reversing           | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

**Traffic Control:** Traffic signal

**Total Collisions:** 66

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2020-Sep-30, Wed,10:56 | Rain        | Rear end    | P.D. only        | Wet            | West     | Turning right     | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Turning right     | Automobile, station wagon | Other motor vehicle |         |
| 2020-Nov-30, Mon,17:01 | Rain        | SMV other   | Non-fatal injury | Wet            | East     | Turning left      | Pick-up truck             | Pedestrian          | 1       |
| 2020-Dec-12, Sat,16:00 | Rain        | Angle       | P.D. only        | Wet            | South    | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Going ahead       | Pick-up truck             | Other motor vehicle |         |
| 2020-Dec-18, Fri,15:55 | Clear       | SMV other   | P.D. only        | Dry            | West     | Going ahead       | Pick-up truck             | Concrete guide rail | 0       |

**Location:** BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

**Traffic Control:** Traffic signal

**Total Collisions:** 54

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Jan-15, Fri,18:30 | Clear       | Turning movement | P.D. only        | Wet            | South    | Turning left      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2016-Jan-17, Sun,11:32 | Clear       | Turning movement | Non-fatal injury | Wet            | South    | Turning left      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2016-Feb-06, Sat,13:10 | Clear       | Sideswipe        | P.D. only        | Dry            | West     | Overtaking        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped           | Passenger van             | Other motor vehicle |         |
| 2016-Feb-21, Sun,10:17 | Clear       | Turning movement | Non-fatal injury | Wet            | North    | Making "U" turn   | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Going ahead       | Pick-up truck             | Other motor vehicle |         |
| 2016-Feb-27, Sat,21:55 | Clear       | Turning movement | P.D. only        | Wet            | South    | Turning left      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead       | Pick-up truck             | Other motor vehicle |         |
| 2016-Aug-03, Wed,23:01 | Clear       | Turning movement | Non-fatal injury | Dry            | South    | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead       | Motorcycle                | Other motor vehicle |         |
|                        |             |                  |                  |                | South    | Turning left      | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

**Traffic Control:** Traffic signal

**Total Collisions:** 54

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event                | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|----------------------------|---------|
| 2016-Sep-07, Wed,21:59 | Rain        | Rear end         | P.D. only        | Wet            | South    | Turning left        | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle        |         |
| 2016-Nov-02, Wed,15:30 | Clear       | Rear end         | P.D. only        | Dry            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle        |         |
| 2016-Nov-26, Sat,15:25 | Clear       | Turning movement | P.D. only        | Dry            | South    | Turning left        | Pick-up truck             | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle        |         |
| 2016-Nov-30, Wed,19:50 | Rain        | Turning movement | Non-fatal injury | Wet            | South    | Turning left        | Pick-up truck             | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Passenger van             | Skidding/sliding           |         |
|                        |             |                  |                  |                | South    | Stopped             | Pick-up truck             | Other motor vehicle        |         |
| 2017-Jan-09, Mon,13:30 | Clear       | Angle            | P.D. only        | Dry            | East     | Turning left        | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle        |         |
| 2017-Jan-10, Tue,08:30 | Snow        | SMV other        | P.D. only        | Slush          | East     | Going ahead         | Automobile, station wagon | Cable guide rail           | 0       |
| 2017-Feb-11, Sat,11:51 | Clear       | Other            | P.D. only        | Wet            | East     | Going ahead         | Automobile, station wagon | Debris falling off vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Automobile, station wagon | Other                      |         |
| 2017-Feb-12, Sun,02:45 | Snow        | Rear end         | P.D. only        | Loose snow     | East     | Going ahead         | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle        |         |
| 2017-Mar-02, Thu,16:09 | Clear       | Rear end         | P.D. only        | Dry            | North    | Slowing or stopping | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle        |         |
| 2017-Mar-08, Wed,15:18 | Clear       | Rear end         | P.D. only        | Dry            | South    | Slowing or stopping | Pick-up truck             | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | South    | Turning left        | Pick-up truck             | Other motor vehicle        |         |
| 2017-Jun-07, Wed,09:00 | Clear       | Turning movement | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle        |         |
| 2017-Jun-29, Thu,12:08 | Rain        | Rear end         | P.D. only        | Wet            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle        | 0       |
|                        |             |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle        |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

**Traffic Control:** Traffic signal

**Total Collisions:** 54

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuver   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2017-Aug-10, Thu,09:01 | Clear       | Sideswipe        | P.D. only        | Dry            | East     | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Aug-18, Fri,17:56 | Rain        | Rear end         | P.D. only        | Wet            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Sep-12, Tue,17:08 | Clear       | Sideswipe        | P.D. only        | Dry            | East     | Merging             | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Sep-29, Fri,22:20 | Rain        | Rear end         | P.D. only        | Wet            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Oct-12, Thu,07:35 | Clear       | Rear end         | P.D. only        | Dry            | East     | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Pick-up truck             | Other motor vehicle |         |
| 2017-Nov-01, Wed,17:09 | Rain        | Turning movement | P.D. only        | Wet            | South    | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Nov-02, Thu,13:43 | Rain        | Rear end         | P.D. only        | Wet            | South    | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle |         |
|                        |             |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-05, Tue,11:37 | Rain        | Rear end         | P.D. only        | Wet            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-11, Mon,12:23 | Clear       | Rear end         | P.D. only        | Dry            | South    | Slowing or stopping | Truck - dump              | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-23, Sat,11:59 | Snow        | Turning movement | Non-fatal injury | Loose snow     | South    | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-27, Wed,13:15 | Clear       | Rear end         | P.D. only        | Dry            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-28, Thu,07:00 | Clear       | SMV other        | P.D. only        | Ice            | East     | Merging             | Automobile, station wagon | Snowbank/drift      | 0       |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

**Traffic Control:** Traffic signal

**Total Collisions:** 54

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event           | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|-----------------------|---------|
| 2017-Dec-28, Thu,17:45 | Clear       | Rear end         | P.D. only        | Dry            | North    | Slowing or stopping | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle   |         |
| 2017-Dec-29, Fri,16:16 | Clear       | Turning movement | P.D. only        | Wet            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle   |         |
| 2017-Dec-29, Fri,18:14 | Clear       | Approaching      | Non-fatal injury | Other          | North    | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Pick-up truck             | Other motor vehicle   |         |
|                        |             |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle   |         |
| 2018-Jan-23, Tue,17:14 | Rain        | Turning movement | Non-fatal injury | Wet            | South    | Turning left        | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle   |         |
|                        |             |                  |                  |                | North    | Turning right       | Municipal transit bus     | Other motor vehicle   |         |
| 2018-Feb-02, Fri,16:53 | Clear       | Approaching      | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle   |         |
| 2018-Jun-13, Wed,14:40 | Rain        | SMV other        | P.D. only        | Wet            | East     | Turning right       | Automobile, station wagon | Skidding/sliding      | 0       |
| 2018-Jul-06, Fri,11:28 | Clear       | Angle            | Non-fatal injury | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Turning left        | Automobile, station wagon | Other motor vehicle   |         |
| 2018-Jul-24, Tue,09:42 | Clear       | SMV other        | P.D. only        | Wet            | South    | Going ahead         | Pick-up truck             | Pole (utility, power) | 0       |
| 2018-Dec-12, Wed,08:34 | Clear       | Sideswipe        | P.D. only        | Wet            | West     | Changing lanes      | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Turning left        | Automobile, station wagon | Other motor vehicle   |         |
| 2019-Feb-22, Fri,17:35 | Clear       | Rear end         | Non-fatal injury | Dry            | North    | Slowing or stopping | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle   |         |
| 2019-Jun-01, Sat,21:55 | Clear       | Turning movement | P.D. only        | Dry            | North    | Turning right       | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle   |         |
| 2019-Aug-08, Thu,16:33 | Rain        | Turning movement | Non-fatal injury | Wet            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle   |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

**Traffic Control:** Traffic signal

**Total Collisions:** 54

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2019-Aug-12, Mon,17:29 | Rain        | Rear end         | P.D. only        | Wet            | North    | Turning right     | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Turning right     | Automobile, station wagon | Other motor vehicle |         |
| 2019-Aug-28, Wed,07:50 | Rain        | Rear end         | P.D. only        | Wet            | South    | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Turning left      | Automobile, station wagon | Other motor vehicle |         |
| 2019-Sep-17, Tue,15:28 | Clear       | Turning movement | Non-fatal injury | Dry            | South    | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2019-Sep-26, Thu,18:08 | Clear       | Angle            | Non-fatal injury | Wet            | West     | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2019-Oct-14, Mon,22:55 | Clear       | Rear end         | P.D. only        | Dry            | South    | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Turning left      | Automobile, station wagon | Other motor vehicle |         |
| 2019-Nov-04, Mon,10:26 | Clear       | Rear end         | P.D. only        | Wet            | West     | Turning right     | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Turning right     | Automobile, station wagon | Other motor vehicle |         |
| 2019-Dec-21, Sat,03:33 | Clear       | SMV other        | P.D. only        | Ice            | South    | Turning left      | Automobile, station wagon | Steel guide rail    | 0       |
| 2020-Feb-10, Mon,20:30 | Clear       | Rear end         | P.D. only        | Wet            | South    | Going ahead       | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2020-Aug-25, Tue,21:13 | Clear       | Turning movement | Non-fatal injury | Dry            | South    | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2020-Sep-13, Sun,16:00 | Clear       | Sideswipe        | P.D. only        | Dry            | South    | Changing lanes    | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Going ahead       | Pick-up truck             | Other motor vehicle |         |
| 2020-Oct-30, Fri,18:30 | Clear       | Rear end         | P.D. only        | Dry            | West     | Going ahead       | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2020-Dec-22, Tue,09:50 | Clear       | Turning movement | P.D. only        | Dry            | South    | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Turning left      | Pick-up truck             | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD btwn OGILVIE RD & OR174 IC112 RAMP36

**Traffic Control:** No control

**Total Collisions:** 8

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Oct-27, Thu,21:54 | Snow        | Rear end    | P.D. only        | Slush          | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2016-Nov-14, Mon,18:02 | Clear       | Sideswipe   | P.D. only        | Dry            | South    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Aug-10, Thu,20:00 | Clear       | Rear end    | Non-fatal injury | Dry            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2019-Apr-26, Fri,14:25 | Rain        | Sideswipe   | P.D. only        | Wet            | North    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-May-16, Thu,15:57 | Clear       | Rear end    | P.D. only        | Dry            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | South    | Stopped             | Unknown                   | Other motor vehicle |         |
| 2019-Aug-17, Sat,15:28 | Clear       | Sideswipe   | P.D. only        | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-Dec-12, Thu,14:50 | Clear       | Rear end    | P.D. only        | Dry            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2020-Jun-22, Mon,08:26 | Clear       | Rear end    | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |

**Location:** BLAIR RD btwn OR174 IC112 RAMP26 & OR174 IC112 RAMP36

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Oct-31, Mon,14:50 | Clear       | Sideswipe   | P.D. only      | Dry            | South    | Changing lanes    | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |             |                |                | South    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** BLAIR RD btwn OR174 IC112 RAMP26 & OR174 IC112 RAMP36

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2019-Jun-06, Thu,16:43 | Clear       | Rear end    | P.D. only      | Dry            | South    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                |                | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |

**Location:** BLAIR RD btwn OR174 IC112 RAMP26 & OR174 IC112 RAMP52

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Oct-21, Fri,18:27 | Rain        | Rear end    | Non-fatal injury | Wet            | North    | Changing lanes      | Automobile, station wagon | Cyclist             | 0       |
|                        |             |             |                  |                | North    | Going ahead         | Bicycle                   | Other motor vehicle |         |
| 2018-Sep-18, Tue,15:00 | Clear       | Rear end    | P.D. only        | Dry            | North    | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | North    | Slowing or stopping | School bus                | Other motor vehicle |         |

**Location:** BLAIR RD btwn OR174 IC112 RAMP52 & OR174 IC112 RAMP53

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2018-Jun-27, Wed,23:33 | Rain        | SMV other   | P.D. only        | Wet            | East     | Turning left      | Automobile, station wagon | Skidding/sliding    | 0       |
| 2019-Oct-10, Thu,16:10 | Clear       | Rear end    | Non-fatal injury | Dry            | South    | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Stopped           | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | South    | Stopped           | Pick-up truck             | Other motor vehicle |         |

**Location:** CADBORO RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 9

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Feb-24, Wed,14:50 | Snow        | Rear end    | P.D. only      | Ice            | East     | Changing lanes    | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** CADBORO RD @ OGILVIE RD

**Traffic Control:** Traffic signal

**Total Collisions:** 9

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuver   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Jul-13, Wed,16:56 | Clear       | Rear end    | P.D. only        | Dry            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Feb-21, Wed,15:55 | Clear       | Rear end    | P.D. only        | Dry            | East     | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Oct-02, Tue,08:02 | Rain        | Rear end    | P.D. only        | Wet            | West     | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2019-Feb-05, Tue,16:43 | Clear       | Rear end    | P.D. only        | Wet            | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2019-May-25, Sat,16:00 | Clear       | Rear end    | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2019-Oct-29, Tue,16:14 | Clear       | Rear end    | Non-fatal injury | Dry            | East     | Going ahead         | Delivery van              | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped             | Pick-up truck             | Other motor vehicle |         |
|                        |             |             |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2020-Jan-29, Wed,11:32 | Clear       | SMV other   | P.D. only        | Dry            | South    | Turning left        | Automobile, station wagon | Curb                | 0       |
| 2020-Nov-05, Thu,18:05 | Clear       | SMV other   | Non-fatal injury | Dry            | South    | Turning right       | Pick-up truck             | Pedestrian          | 1       |

**Location:** CITY PARK DR @ WILBURY RD/HARPER AVE W

**Traffic Control:** Stop sign

**Total Collisions:** 1

| Date/Day/Time          | Environment | Impact Type            | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuver | Vehicle type | First Event        | No. Ped |
|------------------------|-------------|------------------------|----------------|----------------|----------|-------------------|--------------|--------------------|---------|
| 2017-Jan-17, Tue,00:00 | Clear       | SMV unattended vehicle | P.D. only      | Dry            | South    | Unknown           | Unknown      | Unattended vehicle | 0       |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** CITY PARK DR btwn AMBASSADOR AVE & OGILVIE RD

**Traffic Control:** No control

**Total Collisions:** 6

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre                  | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|------------------------------------|---------------------------|---------------------|---------|
| 2018-Jan-11, Thu,12:23 | Clear       | Turning movement | P.D. only        | Wet            | South    | Making "U" turn                    | Unknown                   | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Going ahead                        | Passenger van             | Other motor vehicle |         |
| 2018-Feb-13, Tue,16:18 | Clear       | Angle            | Non-fatal injury | Ice            | East     | Going ahead                        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead                        | Automobile, station wagon | Other motor vehicle |         |
| 2018-Oct-01, Mon,14:43 | Clear       | SMV other        | Non-fatal injury | Dry            | West     | Turning right                      | Automobile, station wagon | Pedestrian          | 1       |
| 2018-Nov-19, Mon,11:39 | Clear       | Sideswipe        | P.D. only        | Wet            | South    | Pulling away from shoulder or curb | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Going ahead                        | Automobile, station wagon | Other motor vehicle |         |
| 2019-Nov-20, Wed,17:04 | Clear       | Turning movement | P.D. only        | Dry            | South    | Making "U" turn                    | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Going ahead                        | Passenger van             | Other motor vehicle |         |
| 2019-Dec-20, Fri,15:30 | Clear       | Turning movement | P.D. only        | Dry            | South    | Turning left                       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead                        | Automobile, station wagon | Other motor vehicle |         |

**Location:** CITY PARK DR btwn OGILVIE RD & WILBURY RD

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type            | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------------|----------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Dec-16, Fri,09:32 | Clear       | Turning movement       | P.D. only      | Wet            | South    | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                        |                |                | North    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2020-Jan-16, Thu,00:01 | Clear       | SMV unattended vehicle | P.D. only      | Dry            | North    | Unknown           | Unknown                   | Unattended vehicle  | 0       |

**Location:** OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

**Traffic Control:** Traffic signal

**Total Collisions:** 1

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2019-Aug-23, Fri,20:30 | Clear       | Rear end    | P.D. only      | Dry            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD @ 240 W OF BLAIR RD

**Traffic Control:** Traffic signal

**Total Collisions:** 6

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Jan-12, Tue,14:33 | Snow        | Rear end    | P.D. only        | Loose snow     | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2016-Oct-17, Mon,15:40 | Clear       | Rear end    | Non-fatal injury | Dry            | South    | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | South    | Turning right       | Automobile, station wagon | Other motor vehicle |         |
| 2018-Mar-19, Mon,16:24 | Clear       | Rear end    | P.D. only        | Dry            | West     | Unknown             | Unknown                   | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2019-Apr-06, Sat,17:31 | Clear       | Rear end    | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2019-Aug-21, Wed,16:51 | Clear       | Rear end    | Non-fatal injury | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2019-Oct-11, Fri,09:50 | Clear       | Rear end    | P.D. only        | Dry            | West     | Going ahead         | Passenger van             | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |

**Location:** OGILVIE RD @ BATHGATE DR/CITYPARK DR W

**Traffic Control:** Traffic signal

**Total Collisions:** 37

| Date/Day/Time          | Environment | Impact Type      | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|----------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Jan-05, Tue,08:40 | Clear       | Sideswipe        | P.D. only      | Dry            | West     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                |                | West     | Turning left      | Municipal transit bus     | Other motor vehicle |         |
| 2016-Jan-05, Tue,08:46 | Clear       | Turning movement | P.D. only      | Dry            | East     | Turning left      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                |                | East     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2016-Jan-09, Sat,18:15 | Clear       | Other            | P.D. only      | Wet            | East     | Making "U" turn   | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                |                | South    | Turning right     | Pick-up truck             | Other motor vehicle |         |
| 2016-Mar-12, Sat,13:43 | Clear       | Turning movement | P.D. only      | Dry            | East     | Making "U" turn   | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                |                | West     | Changing lanes    | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD @ BATHGATE DR/CITYPARK DR W

**Traffic Control:** Traffic signal

**Total Collisions:** 37

| Date/Day/Time          | Environment   | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|---------------|------------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Jun-01, Wed,10:10 | Clear         | Turning movement | Non-fatal injury | Dry            | East     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2016-Jun-11, Sat,15:14 | Clear         | Rear end         | P.D. only        | Dry            | South    | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2016-Aug-13, Sat,10:27 | Rain          | Angle            | Non-fatal injury | Wet            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                  |                | North    | Going ahead         | Pick-up truck             | Other motor vehicle |         |
|                        |               |                  |                  |                | South    | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2016-Nov-06, Sun,15:45 | Clear         | SMV other        | Non-fatal injury | Dry            | West     | Going ahead         | Passenger van             | Pedestrian          | 1       |
| 2017-Jan-09, Mon,18:30 | Clear         | Sideswipe        | P.D. only        | Slush          | North    | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jan-20, Fri,14:48 | Freezing Rain | Rear end         | Non-fatal injury | Wet            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                  |                | East     | Slowing or stopping | Pick-up truck             | Other motor vehicle |         |
| 2017-Feb-18, Sat,12:10 | Clear         | Angle            | Non-fatal injury | Wet            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                  |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Mar-04, Sat,00:30 | Snow          | SMV other        | P.D. only        | Ice            | West     | Turning left        | Automobile, station wagon | Skidding/sliding    | 0       |
| 2017-Mar-12, Sun,14:00 | Clear         | Rear end         | P.D. only        | Dry            | West     | Going ahead         | Pick-up truck             | Other motor vehicle | 0       |
|                        |               |                  |                  |                | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2017-Apr-09, Sun,22:06 | Clear         | Turning movement | P.D. only        | Dry            | West     | Going ahead         | Unknown                   | Other motor vehicle | 0       |
|                        |               |                  |                  |                | East     | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jun-20, Tue,08:06 | Rain          | Sideswipe        | P.D. only        | Wet            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2017-Jul-21, Fri,16:02 | Clear         | Angle            | P.D. only        | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |                  |                  |                | North    | Going ahead         | Municipal transit bus     | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD @ BATHGATE DR/CITYPARK DR W

**Traffic Control:** Traffic signal

**Total Collisions:** 37

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2017-Oct-11, Wed,15:00 | Clear       | Rear end         | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2017-Nov-27, Mon,12:14 | Clear       | Angle            | P.D. only        | Ice            | South    | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Turning left        | Automobile, station wagon | Other motor vehicle |         |
| 2017-Dec-29, Fri,10:41 | Clear       | Rear end         | Non-fatal injury | Dry            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2018-Jan-22, Mon,16:19 | Snow        | Turning movement | P.D. only        | Loose snow     | South    | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Mar-30, Fri,11:31 | Clear       | Angle            | P.D. only        | Dry            | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-May-11, Fri,16:18 | Clear       | Turning movement | P.D. only        | Dry            | East     | Making "U" turn     | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Jun-02, Sat,14:57 | Clear       | Angle            | P.D. only        | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Turning left        | Pick-up truck             | Other motor vehicle |         |
| 2018-Jul-12, Thu,13:05 | Clear       | SMV other        | P.D. only        | Dry            | South    | Turning left        | Automobile, station wagon | Other               | 0       |
| 2018-Jul-14, Sat,15:25 | Clear       | Turning movement | Non-fatal injury | Dry            | East     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Aug-02, Thu,12:13 | Clear       | Rear end         | Non-fatal injury | Dry            | West     | Going ahead         | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Aug-16, Thu,18:06 | Clear       | Sideswipe        | P.D. only        | Dry            | East     | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2018-Aug-30, Thu,17:20 | Clear       | Rear end         | P.D. only        | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Stopped             | Unknown                   | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD @ BATHGATE DR/CITYPARK DR W

**Traffic Control:** Traffic signal

**Total Collisions:** 37

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2018-Oct-12, Fri,20:28 | Clear       | Turning movement | Non-fatal injury | Dry            | East     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-Jan-03, Thu,07:37 | Snow        | SMV other        | P.D. only        | Slush          | West     | Going ahead         | Automobile, station wagon | Ran off road        | 0       |
| 2019-Jan-21, Mon,15:30 | Clear       | Approaching      | P.D. only        | Ice            | West     | Going ahead         | Automobile, station wagon | Skidding/sliding    | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-Feb-15, Fri,18:18 | Clear       | Sideswipe        | P.D. only        | Dry            | West     | Overtaking          | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2019-Jul-17, Wed,20:00 | Clear       | SMV other        | Non-fatal injury | Dry            | North    | Turning left        | Automobile, station wagon | Pedestrian          | 2       |
| 2019-Sep-05, Thu,15:45 | Clear       | Turning movement | Non-fatal injury | Dry            | West     | Turning left        | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2019-Dec-10, Tue,13:35 | Clear       | Rear end         | P.D. only        | Dry            | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2019-Dec-15, Sun,16:45 | Clear       | Rear end         | P.D. only        | Ice            | North    | Unknown             | Unknown                   | Other motor vehicle | 0       |
|                        |             |                  |                  |                | North    | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2020-Feb-12, Wed,09:04 | Clear       | Rear end         | Non-fatal injury | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle |         |

**Location:** OGILVIE RD @ CITY PARK DR E/CSIS HQ ACCESS

**Traffic Control:** Traffic signal

**Total Collisions:** 24

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Jan-29, Fri,12:48 | Snow        | Rear end         | P.D. only        | Wet            | West     | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Turning left      | Automobile, station wagon | Other motor vehicle |         |
| 2016-Jun-02, Thu,18:47 | Clear       | Turning movement | Non-fatal injury | Dry            | East     | Making "U" turn   | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD @ CITY PARK DR E/CSIS HQ ACCESS

**Traffic Control:** Traffic signal

**Total Collisions:** 24

| Date/Day/Time          | Environment            | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|------------------------|------------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Jun-03, Fri,14:10 | Clear                  | Rear end         | Non-fatal injury | Dry            | East     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2016-Jun-21, Tue,05:38 | Clear                  | Angle            | P.D. only        | Dry            | East     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | North    | Turning left      | Pick-up truck             | Other motor vehicle |         |
| 2016-Sep-06, Tue,19:27 | Clear                  | Turning movement | P.D. only        | Dry            | West     | Making "U" turn   | Pick-up truck             | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | East     | Going ahead       | Pick-up truck             | Other motor vehicle |         |
| 2016-Sep-08, Thu,13:51 | Rain                   | Turning movement | Non-fatal injury | Wet            | West     | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | East     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2016-Oct-20, Thu,08:38 | Fog, mist, smoke, dust | Turning movement | Non-fatal injury | Dry            | West     | Turning left      | Pick-up truck             | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | East     | Going ahead       | Pick-up truck             | Other motor vehicle |         |
| 2016-Dec-30, Fri,13:03 | Clear                  | Rear end         | P.D. only        | Dry            | East     | Changing lanes    | Automobile, station wagon | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2017-Feb-17, Fri,18:51 | Clear                  | Turning movement | P.D. only        | Dry            | West     | Turning left      | Pick-up truck             | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | East     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2017-May-18, Thu,19:13 | Clear                  | Rear end         | P.D. only        | Dry            | North    | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | North    | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2017-May-23, Tue,12:53 | Clear                  | Rear end         | Non-fatal injury | Dry            | East     | Going ahead       | Pick-up truck             | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
|                        |                        |                  |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
|                        |                        |                  |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2017-Sep-03, Sun,17:40 | Rain                   | SMV other        | Non-fatal injury | Wet            | East     | Turning right     | Automobile, station wagon | Curb                | 0       |
| 2017-Oct-13, Fri,11:42 | Clear                  | Turning movement | P.D. only        | Dry            | South    | Going ahead       | Pick-up truck             | Other motor vehicle | 0       |
|                        |                        |                  |                  |                | South    | Making "U" turn   | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD @ CITY PARK DR E/CSIS HQ ACCESS

**Traffic Control:** Traffic signal

**Total Collisions:** 24

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2018-Jun-13, Wed,10:00 | Rain        | Turning movement | P.D. only        | Wet            | West     | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2018-Jun-27, Wed,14:35 | Clear       | Turning movement | P.D. only        | Dry            | West     | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead       | Pick-up truck             | Other motor vehicle |         |
| 2019-Jun-13, Thu,16:40 | Clear       | Rear end         | P.D. only        | Dry            | East     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2019-Sep-05, Thu,15:15 | Clear       | Rear end         | P.D. only        | Dry            | West     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2019-Sep-06, Fri,15:55 | Rain        | Rear end         | P.D. only        | Wet            | West     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | West     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2019-Sep-21, Sat,11:25 | Clear       | Turning movement | P.D. only        | Dry            | West     | Making "U" turn   | Passenger van             | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2019-Sep-26, Thu,14:56 | Clear       | SMV other        | Non-fatal injury | Dry            | West     | Going ahead       | Automobile, station wagon | Pedestrian          | 1       |
| 2019-Nov-08, Fri,12:15 | Clear       | Rear end         | P.D. only        | Dry            | East     | Going ahead       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle |         |
| 2020-Jan-31, Fri,06:50 | Clear       | Turning movement | Non-fatal injury | Dry            | West     | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2020-Nov-12, Thu,16:11 | Clear       | Turning movement | P.D. only        | Dry            | West     | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | East     | Going ahead       | Automobile, station wagon | Other motor vehicle |         |
| 2020-Dec-21, Mon,17:15 | Clear       | Turning movement | P.D. only        | Wet            | North    | Turning left      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                  |                  |                | South    | Going ahead       | Automobile, station wagon | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD @ MATHESON RD/PALMERSTON DR

**Traffic Control:** Traffic signal

**Total Collisions:** 19

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre                    | Vehicle type              | First Event           | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|--------------------------------------|---------------------------|-----------------------|---------|
| 2016-Feb-18, Thu,10:34 | Clear       | Turning movement | P.D. only        | Wet            | South    | Turning left                         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | North    | Turning right                        | Passenger van             | Other motor vehicle   |         |
| 2016-Aug-29, Mon,08:55 | Clear       | Angle            | P.D. only        | Dry            | West     | Going ahead                          | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Stopped                              | Automobile, station wagon | Other motor vehicle   |         |
| 2017-Feb-22, Wed,12:24 | Rain        | Rear end         | Non-fatal injury | Wet            | South    | Turning right                        | Passenger van             | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Turning right                        | Passenger van             | Other motor vehicle   |         |
| 2017-Jul-21, Fri,17:40 | Clear       | Rear end         | P.D. only        | Dry            | West     | Going ahead                          | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Stopped                              | Automobile, station wagon | Other motor vehicle   |         |
| 2017-Oct-05, Thu,16:02 | Clear       | Rear end         | P.D. only        | Dry            | West     | Going ahead                          | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Stopped                              | Automobile, station wagon | Other motor vehicle   |         |
| 2018-Feb-03, Sat,17:53 | Snow        | Rear end         | P.D. only        | Wet            | East     | Making "U" turn                      | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | East     | Going ahead                          | Automobile, station wagon | Other motor vehicle   |         |
| 2018-Feb-16, Fri,13:21 | Clear       | Rear end         | P.D. only        | Wet            | West     | Slowing or stopping                  | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Going ahead                          | Automobile, station wagon | Other motor vehicle   |         |
| 2018-Jul-09, Mon,09:04 | Clear       | Angle            | P.D. only        | Dry            | West     | Pulling onto shoulder or toward curb | Municipal transit bus     | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Turning right                        | Pick-up truck             | Other motor vehicle   |         |
| 2018-Nov-29, Thu,20:14 | Clear       | Turning movement | P.D. only        | Dry            | East     | Making "U" turn                      | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Going ahead                          | Automobile, station wagon | Other motor vehicle   |         |
| 2018-Dec-06, Thu,09:21 | Clear       | Rear end         | P.D. only        | Wet            | West     | Going ahead                          | Pick-up truck             | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Stopped                              | Automobile, station wagon | Other motor vehicle   |         |
| 2019-Jan-01, Tue,04:42 | Snow        | SMV other        | P.D. only        | Slush          | West     | Reversing                            | Snow plow                 | Pole (utility, power) | 0       |
| 2019-Mar-10, Sun,13:13 | Snow        | SMV other        | P.D. only        | Packed snow    | East     | Going ahead                          | Automobile, station wagon | Skidding/sliding      | 0       |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD @ MATHESON RD/PALMERSTON DR

**Traffic Control:** Traffic signal

**Total Collisions:** 19

| Date/Day/Time          | Environment | Impact Type      | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event           | No. Ped |
|------------------------|-------------|------------------|------------------|----------------|----------|---------------------|---------------------------|-----------------------|---------|
| 2019-Apr-24, Wed,15:53 | Clear       | Turning movement | Non-fatal injury | Dry            | West     | Making "U" turn     | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle   |         |
| 2019-May-12, Sun,16:45 | Clear       | Rear end         | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle   |         |
| 2019-Sep-15, Sun,19:45 | Clear       | Turning movement | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | East     | Turning left        | Automobile, station wagon | Other motor vehicle   |         |
| 2019-Dec-20, Fri,08:54 | Clear       | Angle            | P.D. only        | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | North    | Turning left        | Automobile, station wagon | Other motor vehicle   |         |
| 2020-Sep-09, Wed,17:00 | Rain        | Other            | P.D. only        | Wet            | North    | Reversing           | Passenger van             | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | South    | Stopped             | Automobile, station wagon | Other motor vehicle   |         |
| 2020-Sep-10, Thu,20:54 | Clear       | SMV other        | P.D. only        | Dry            | East     | Turning right       | Automobile, station wagon | Pole (utility, power) | 0       |
| 2020-Sep-21, Mon,14:24 | Clear       | Rear end         | P.D. only        | Dry            | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |                  |                  |                | West     | Stopped             | Automobile, station wagon | Other motor vehicle   |         |

**Location:** OGILVIE RD btwn 240 W OF BLAIR RD & CITY PARK DR

**Traffic Control:** No control

**Total Collisions:** 5

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event           | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|-------------------|---------------------------|-----------------------|---------|
| 2017-May-18, Thu,16:42 | Clear       | Sideswipe   | P.D. only      | Dry            | East     | Changing lanes    | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |             |                |                | East     | Going ahead       | Automobile, station wagon | Other motor vehicle   |         |
| 2017-Dec-01, Fri,19:44 | Clear       | Rear end    | P.D. only      | Dry            | East     | Going ahead       | Pick-up truck             | Other motor vehicle   | 0       |
|                        |             |             |                |                | East     | Stopped           | Pick-up truck             | Other motor vehicle   |         |
| 2017-Dec-08, Fri,10:43 | Clear       | SMV other   | P.D. only      | Dry            | South    | Reversing         | Pick-up truck             | Pole (utility, power) | 0       |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD btwn 240 W OF BLAIR RD & CITY PARK DR

**Traffic Control:** No control

**Total Collisions:** 5

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre | Vehicle type              | First Event           | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|-------------------|---------------------------|-----------------------|---------|
| 2018-Aug-17, Fri,07:16 | Clear       | Sideswipe   | Non-fatal injury | Dry            | West     | Changing lanes    | Automobile, station wagon | Other motor vehicle   | 1       |
|                        |             |             |                  |                | West     | Going ahead       | Automobile, station wagon | Other motor vehicle   |         |
|                        |             |             |                  |                | East     | Stopped           | Automobile, station wagon | Other motor vehicle   |         |
| 2020-May-10, Sun,22:17 | Clear       | SMV other   | P.D. only        | Dry            | West     | Going ahead       | Pick-up truck             | Pole (utility, power) | 0       |

**Location:** OGILVIE RD btwn BATHGATE DR & CADBORO RD

**Traffic Control:** No control

**Total Collisions:** 6

| Date/Day/Time          | Environment | Impact Type            | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|------------------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Feb-21, Sun,00:00 | Clear       | SMV unattended vehicle | P.D. only        | Wet            | Unknown  | Unknown             | Unknown                   | Unattended vehicle  | 0       |
| 2016-May-06, Fri,17:28 | Clear       | Rear end               | P.D. only        | Dry            | East     | Slowing or stopping | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                        |                  |                | East     | Stopped             | Passenger van             | Other motor vehicle |         |
| 2017-Nov-16, Thu,16:45 | Rain        | Rear end               | Non-fatal injury | Wet            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                        |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2018-Apr-24, Tue,23:41 | Clear       | SMV other              | P.D. only        | Dry            | West     | Going ahead         | Automobile, station wagon | Building or wall    | 0       |
| 2019-Dec-21, Sat,13:37 | Clear       | Angle                  | P.D. only        | Dry            | South    | Turning right       | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |                        |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |
| 2020-Aug-09, Sun,23:17 | Clear       | Rear end               | P.D. only        | Dry            | West     | Changing lanes      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |                        |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |

**Location:** OGILVIE RD btwn BATHGATE DR & CITY PARK DR (1)

**Traffic Control:** No control

**Total Collisions:** 6

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuvre   | Vehicle type  | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------|---------------------|---------|
| 2016-Jul-04, Mon,16:27 | Clear       | Rear end    | Non-fatal injury | Dry            | East     | Going ahead         | Pick-up truck | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Slowing or stopping | Pick-up truck | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD btwn BATHGATE DR & CITY PARK DR (1)

**Traffic Control:** No control

**Total Collisions:** 6

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuver   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Aug-13, Sat,17:08 | Snow        | Rear end    | Non-fatal injury | Wet            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Slowing or stopping | Pick-up truck             | Other motor vehicle |         |
| 2017-Feb-15, Wed,09:37 | Snow        | Rear end    | Non-fatal injury | Packed snow    | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped             | Municipal transit bus     | Other motor vehicle |         |
| 2019-May-15, Wed,17:54 | Clear       | Sideswipe   | P.D. only        | Dry            | East     | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |
| 2019-Oct-17, Thu,18:58 | Rain        | Sideswipe   | P.D. only        | Wet            | West     | Changing lanes      | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | West     | Going ahead         | Pick-up truck             | Other motor vehicle |         |
| 2020-Jan-17, Fri,18:03 | Clear       | Rear end    | Non-fatal injury | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                  |                | East     | Stopped             | Automobile, station wagon | Other motor vehicle |         |

**Location:** OGILVIE RD btwn BATHGATE DR & CITY PARK DR (2)

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuver   | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2016-Nov-01, Tue,11:14 | Clear       | Rear end    | P.D. only      | Dry            | West     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | West     | Slowing or stopping | Passenger van             | Other motor vehicle |         |
|                        |             |             |                |                | West     | Slowing or stopping | Automobile, station wagon | Other motor vehicle |         |
| 2018-Oct-31, Wed,17:50 | Rain        | Sideswipe   | P.D. only      | Wet            | East     | Changing lanes      | Pick-up truck             | Other motor vehicle | 0       |
|                        |             |             |                |                | East     | Going ahead         | Automobile, station wagon | Other motor vehicle |         |

**Location:** OGILVIE RD btwn BLAIR RD (1) & CITY PARK DR

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuver | Vehicle type              | First Event         | No. Ped |
|------------------------|-------------|-------------|----------------|----------------|----------|-------------------|---------------------------|---------------------|---------|
| 2016-Sep-30, Fri,13:01 | Clear       | Angle       | P.D. only      | Dry            | East     | Changing lanes    | Automobile, station wagon | Other motor vehicle | 0       |
|                        |             |             |                |                | North    | Turning right     | Pick-up truck             | Other motor vehicle |         |

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2016 **To:** December 31, 2020

**Location:** OGILVIE RD btwn BLAIR RD (1) & CITY PARK DR

**Traffic Control:** No control

**Total Collisions:** 2

| Date/Day/Time          | Environment   | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuver   | Vehicle type              | First Event         | No. Ped |
|------------------------|---------------|-------------|------------------|----------------|----------|---------------------|---------------------------|---------------------|---------|
| 2020-Dec-12, Sat,15:17 | Freezing Rain | Rear end    | Non-fatal injury | Ice            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle | 0       |
|                        |               |             |                  |                | East     | Slowing or stopping | Pick-up truck             | Other motor vehicle |         |

**Location:** OGILVIE RD btwn CADBORO RD & MATHESON RD

**Traffic Control:** No control

**Total Collisions:** 7

| Date/Day/Time          | Environment | Impact Type | Classification   | Surface Cond'n | Veh. Dir | Vehicle Manoeuver   | Vehicle type              | First Event           | No. Ped |
|------------------------|-------------|-------------|------------------|----------------|----------|---------------------|---------------------------|-----------------------|---------|
| 2016-Apr-08, Fri,17:28 | Clear       | Sideswipe   | P.D. only        | Wet            | East     | Changing lanes      | Unknown                   | Other motor vehicle   | 0       |
|                        |             |             |                  |                | East     | Going ahead         | Passenger van             | Other motor vehicle   |         |
| 2018-Jan-02, Tue,21:40 | Snow        | Angle       | Non-fatal injury | Slush          | South    | Turning right       | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |             |                  |                | West     | Going ahead         | Automobile, station wagon | Other motor vehicle   |         |
| 2018-May-28, Mon,20:56 | Clear       | SMV other   | Non-fatal injury | Dry            | East     | Going ahead         | Automobile, station wagon | Ran off road          | 0       |
| 2018-Jul-30, Mon,13:13 | Clear       | SMV other   | P.D. only        | Dry            | South    | Turning right       | Automobile, station wagon | Pole (utility, power) | 0       |
| 2019-Apr-04, Thu,08:15 | Clear       | Rear end    | P.D. only        | Dry            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |             |                  |                | East     | Slowing or stopping | Automobile, station wagon | Other motor vehicle   |         |
| 2020-Jan-11, Sat,21:20 | Clear       | Rear end    | P.D. only        | Wet            | East     | Going ahead         | Automobile, station wagon | Other motor vehicle   | 0       |
|                        |             |             |                  |                | East     | Going ahead         | Pick-up truck             | Other motor vehicle   |         |
| 2020-Jan-29, Wed,15:17 | Clear       | Rear end    | P.D. only        | Loose snow     | West     | Going ahead         | Pick-up truck             | Other motor vehicle   | 0       |
|                        |             |             |                  |                | West     | Stopped             | Passenger van             | Other motor vehicle   |         |

## **APPENDIX F**

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Blair TOD Plan

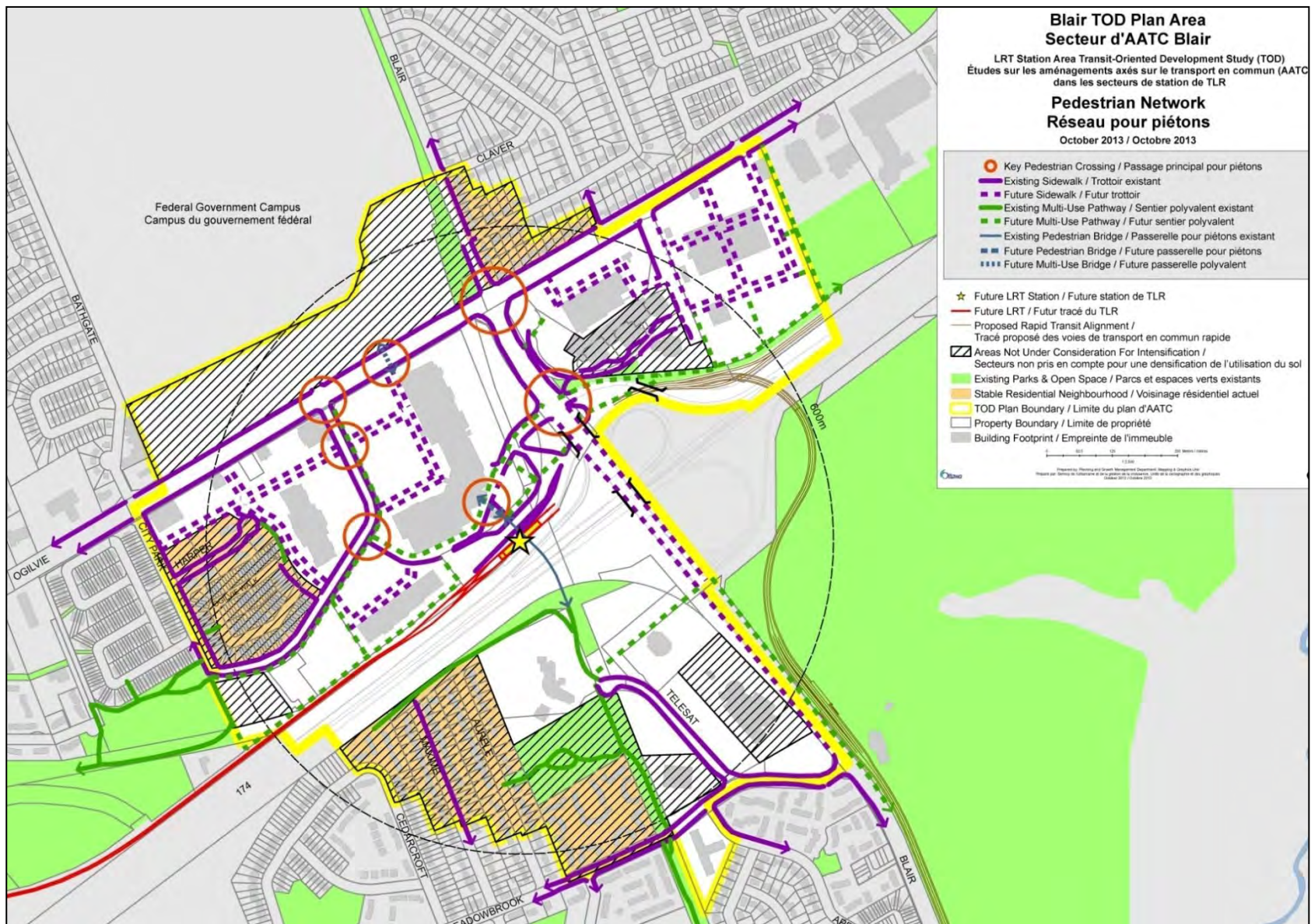


Figure 72: Blair Pedestrian Network

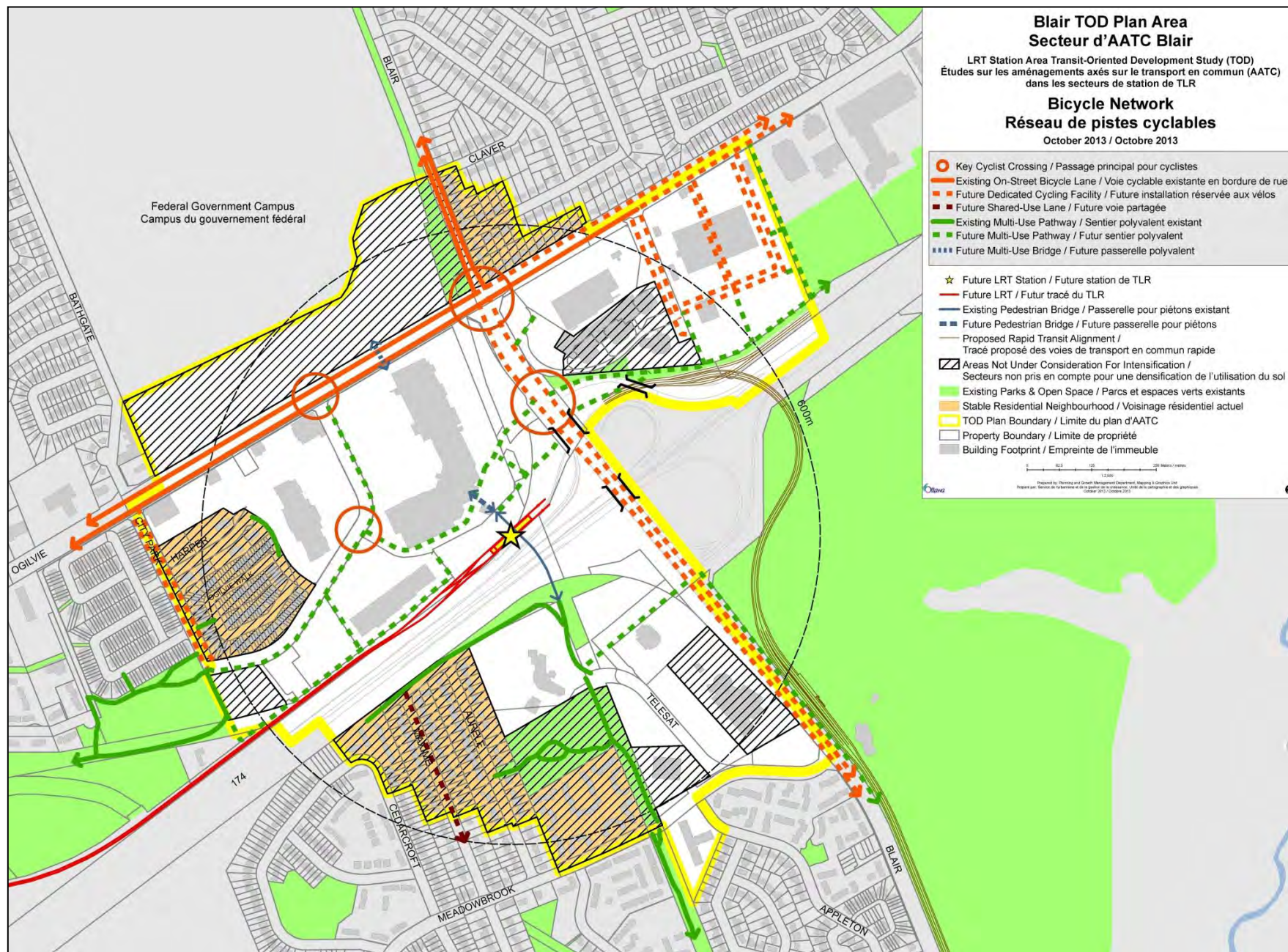


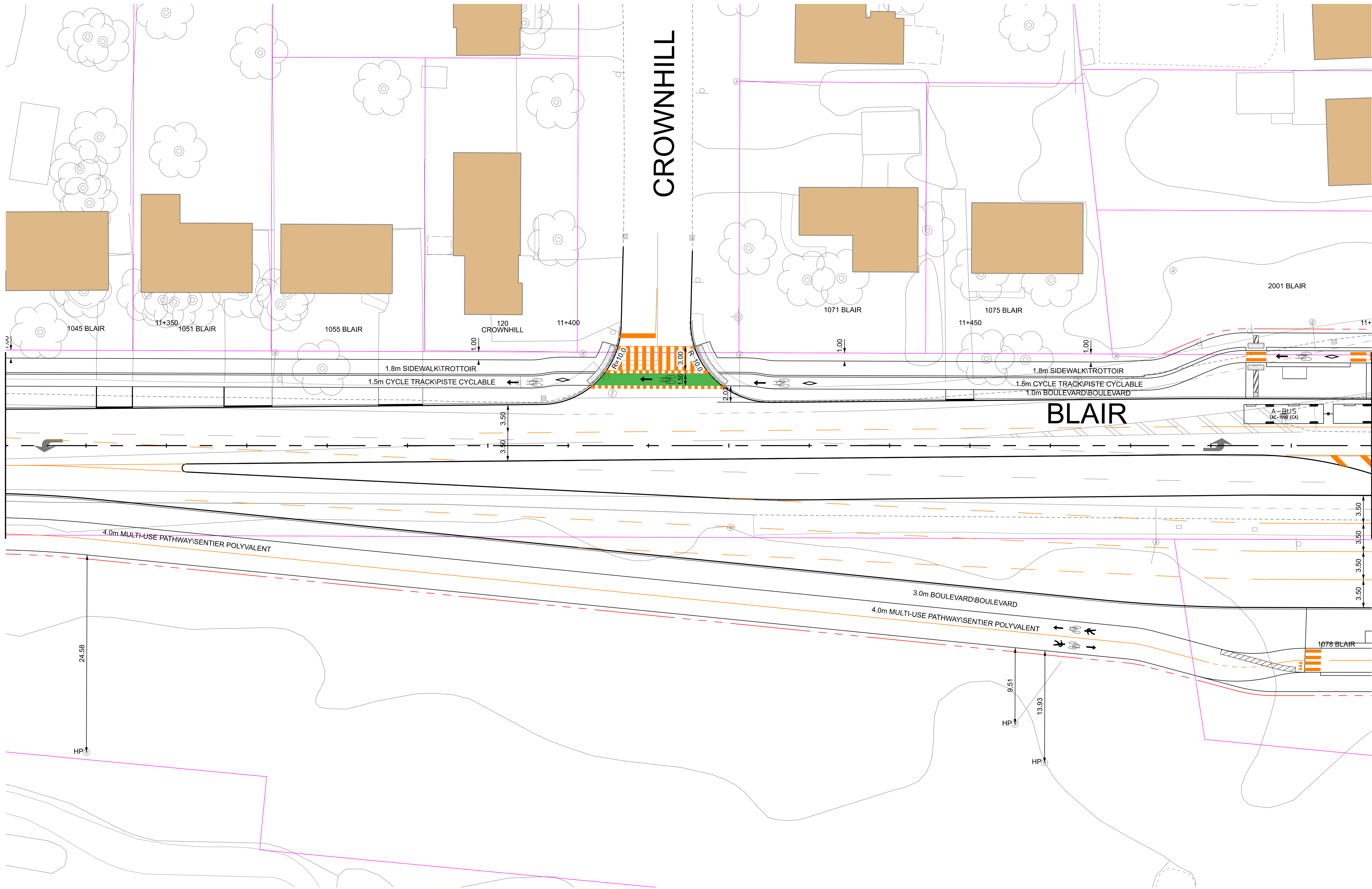
Figure 73: Blair Bicycle Network

## **APPENDIX G**

---

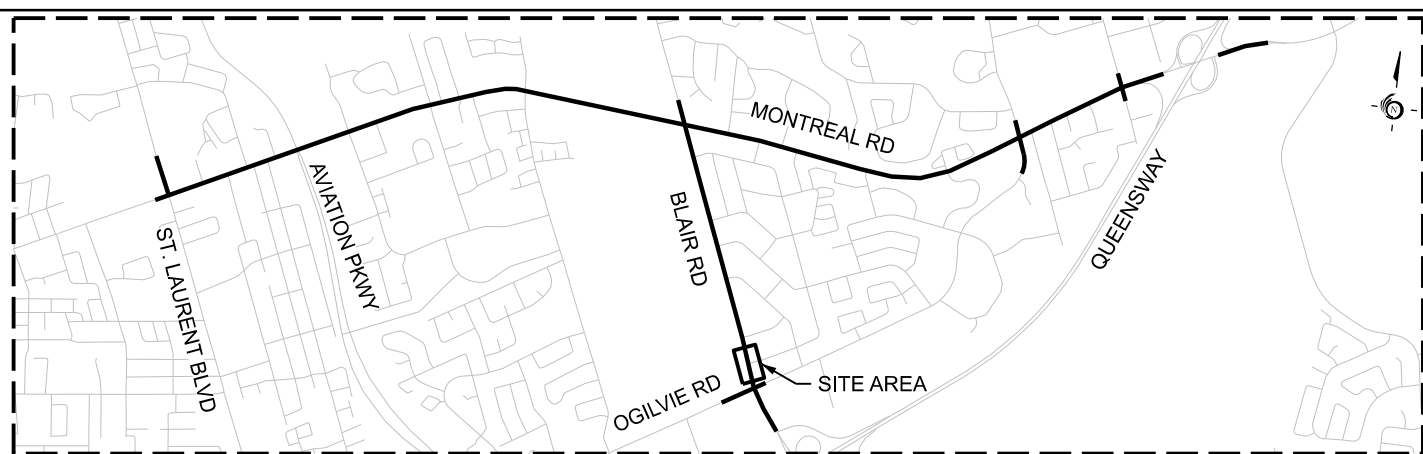
Relevant EA Report Excerpts

SEE DRAWING NO. 39  
MATCH LINE - STA. 11+330



SEE DRAWING NO. 41  
MATCH LINE - STA. 11+500

KEY PLAN



LEGEND

- |  |                         |  |                                              |
|--|-------------------------|--|----------------------------------------------|
|  | EXISTING PROPERTY LINE  |  | EXISTING CONDITIONS                          |
|  | EXISTING ROW PROTECTION |  | PROPOSED FUNCTIONAL DESIGN                   |
|  | PROPOSED PROPERTY LINE  |  | PROPOSED FUNCTIONAL DESIGN PAVEMENT MARKINGS |

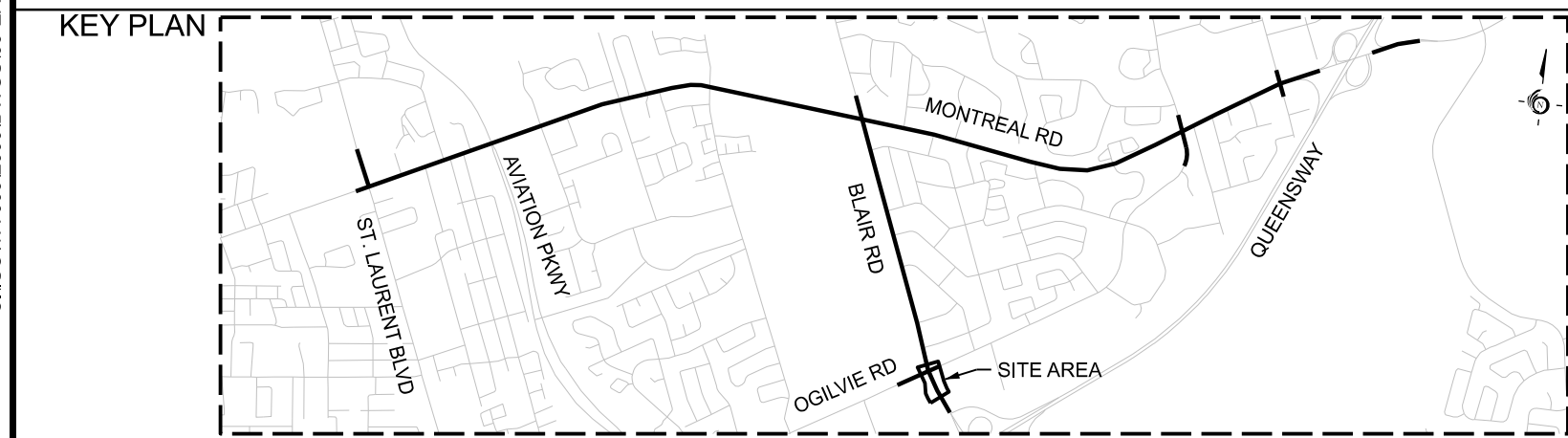
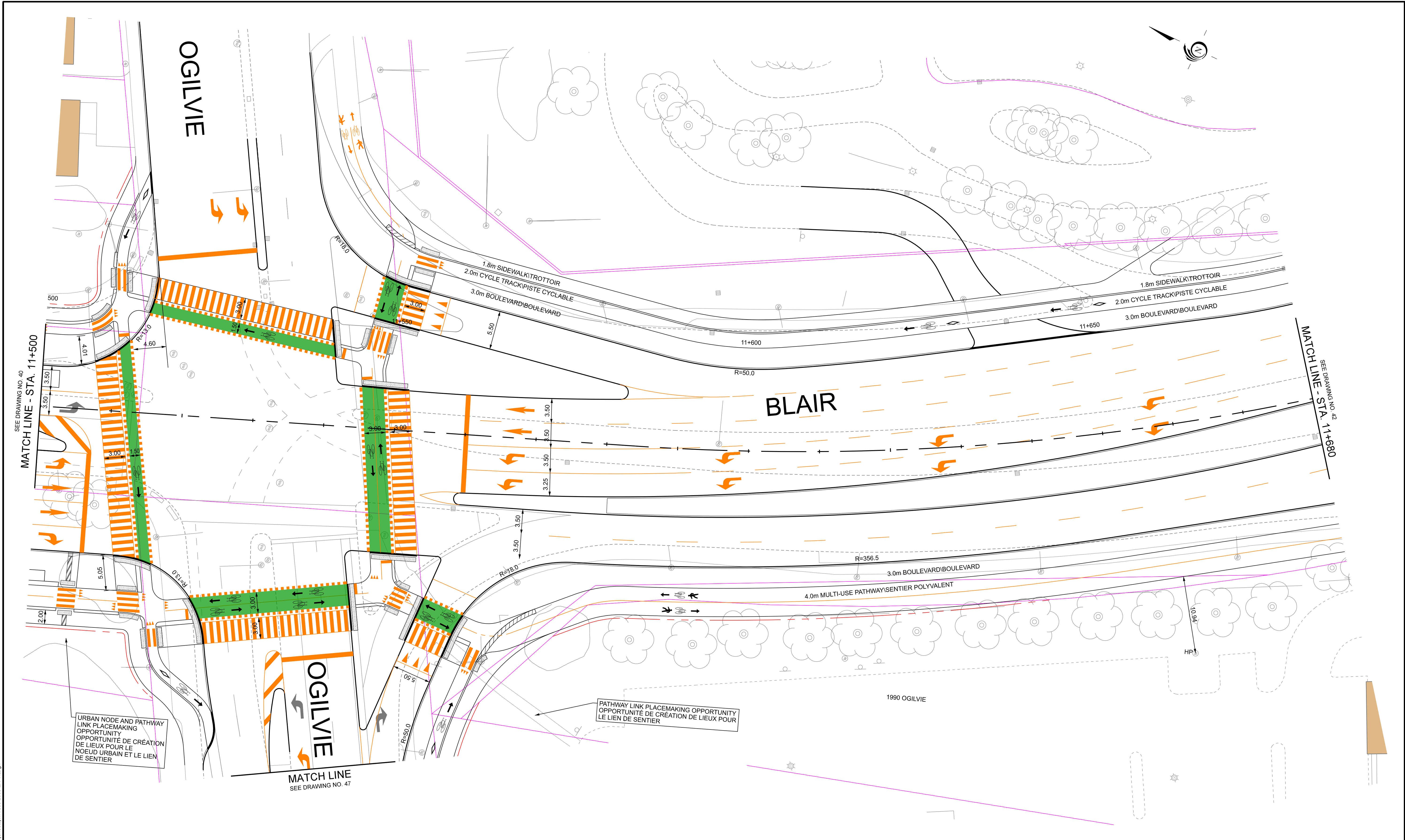


|                                         |                      |             |
|-----------------------------------------|----------------------|-------------|
| Date:<br>23 August 2021                 | Designed By:         | Drawn By:   |
| Project Manager:                        | Discipline Engineer: | Checked By: |
| Scale:<br>0m 2.5 5 10 20<br>HORIZONTAL  |                      |             |
| CAD File Name:<br>477003-2000-EA-40.DGN |                      | Plot Date:  |



MONTREAL - BLAIR TRANSIT PRIORITY CORRIDOR  
STA. 11+330 to STA 11+500

|               |                |                 |
|---------------|----------------|-----------------|
| Drawings No.: | Revision<br>00 | Sheet No.<br>40 |
|---------------|----------------|-----------------|



LEGEND

- EXISTING PROPERTY LINE
- EXISTING ROW PROTECTION
- PROPOSED PROPERTY LINE

- EXISTING CONDITIONS
- PROPOSED FUNCTIONAL DESIGN
- PROPOSED FUNCTIONAL DESIGN PAVEMENT MARKINGS

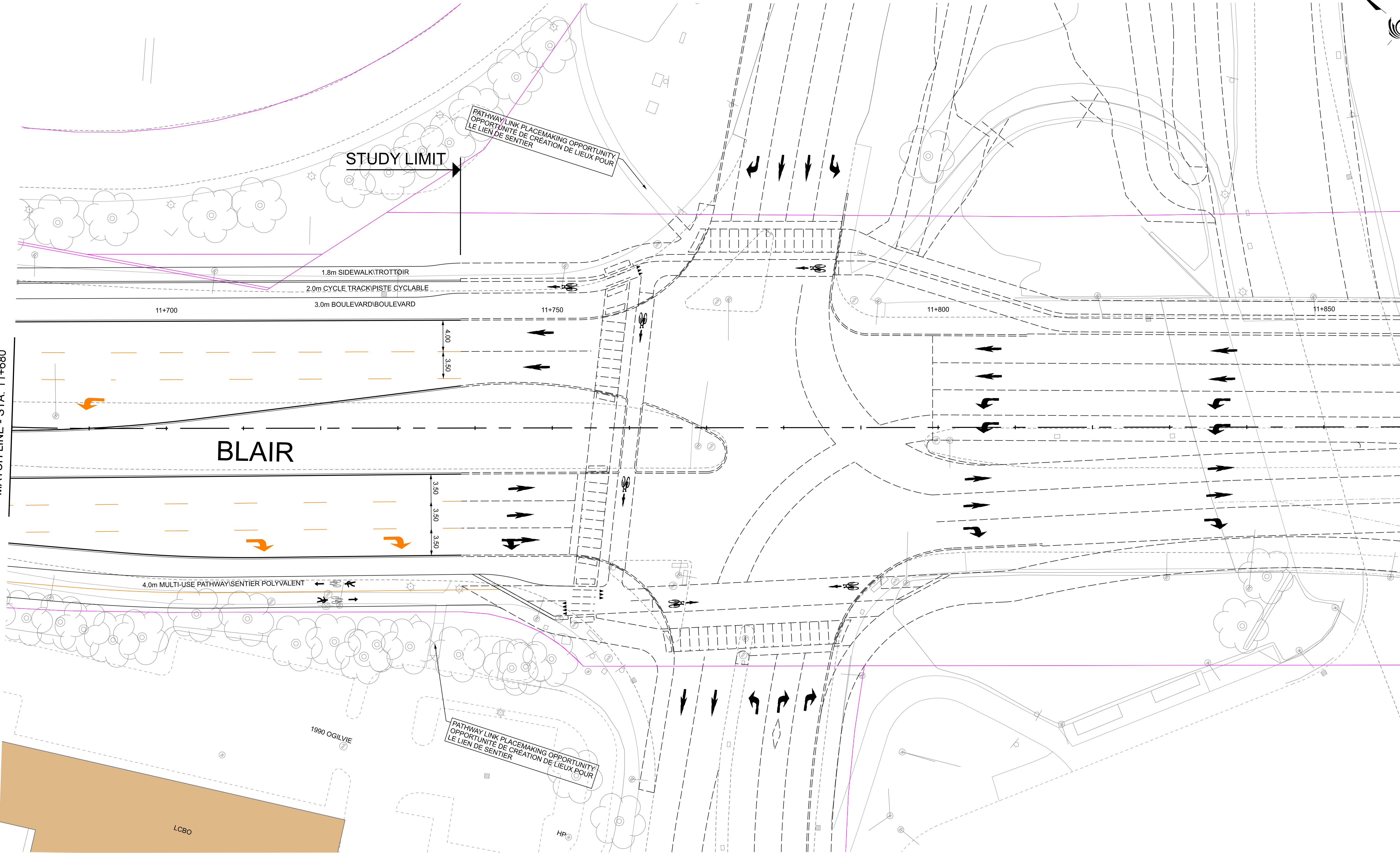


|                  |                       |                      |             |
|------------------|-----------------------|----------------------|-------------|
| Date:            | 22 October 2021       | Designed By:         | Drawn By:   |
| Project Manager: |                       | Discipline Engineer: | Checked By: |
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| Plot Date:       |                       |                      |             |

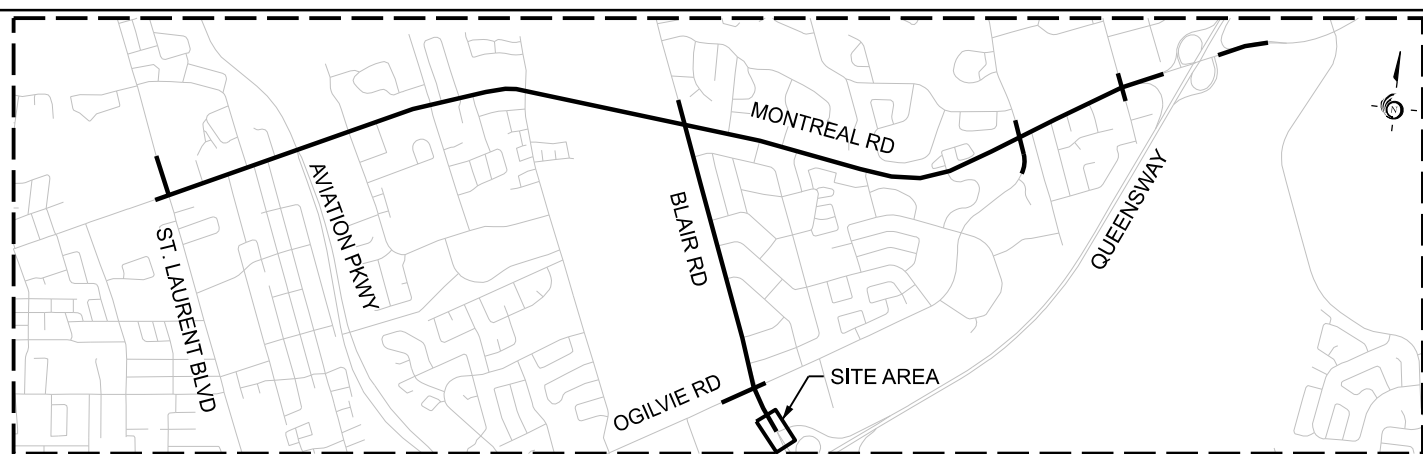


MONTREAL - BLAIR TRANSIT PRIORITY CORRIDOR  
STA. 11+500 to STA 11+680

SEE DRAWING NO. 41  
MATCH LINE - STA. 11+680



KEY PLAN



LEGEND

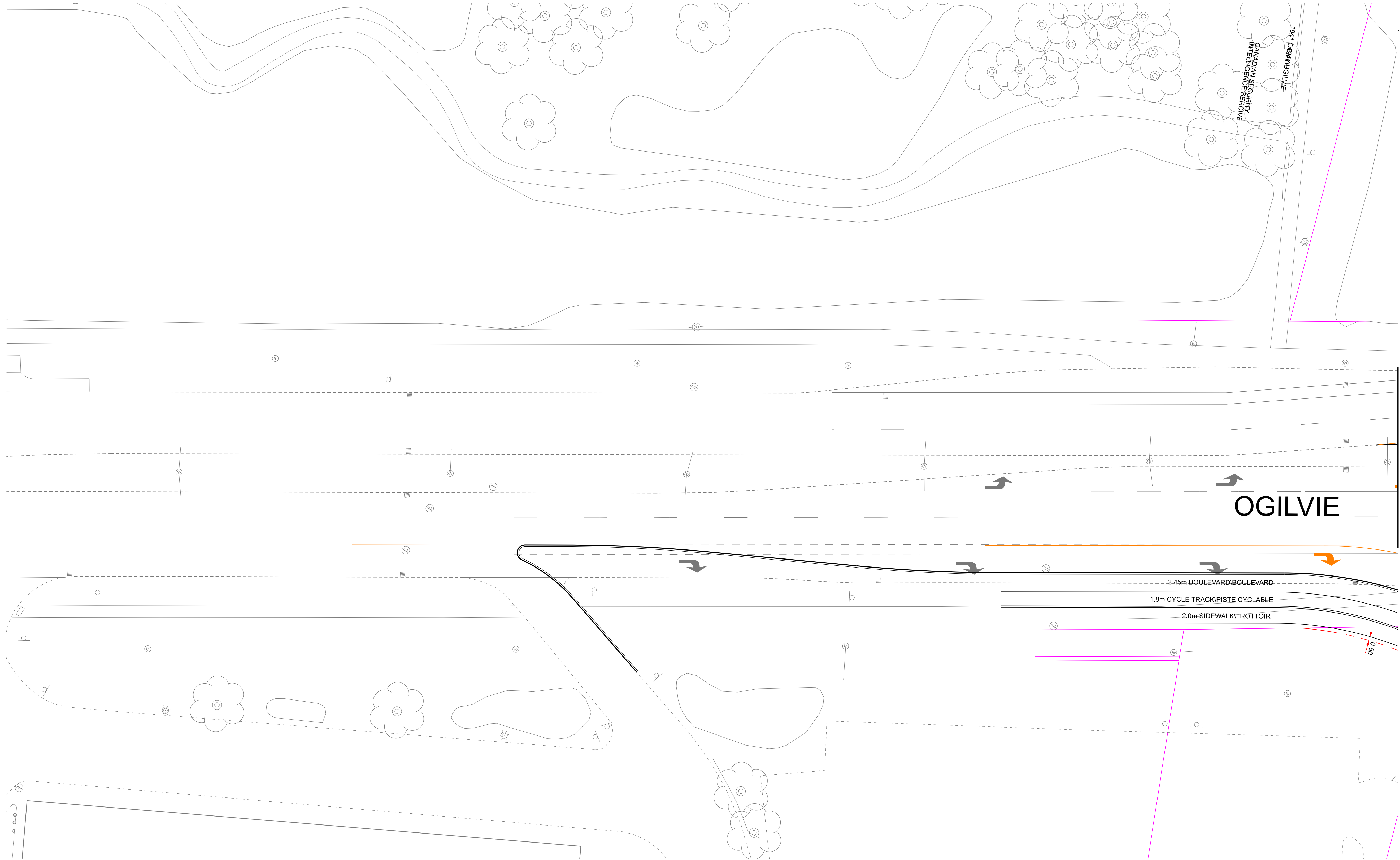
|  |                         |  |                                              |
|--|-------------------------|--|----------------------------------------------|
|  | EXISTING PROPERTY LINE  |  | EXISTING CONDITIONS                          |
|  | EXISTING ROW PROTECTION |  | PROPOSED FUNCTIONAL DESIGN                   |
|  | PROPOSED PROPERTY LINE  |  | PROPOSED FUNCTIONAL DESIGN PAVEMENT MARKINGS |
|  |                         |  | BLAIR ROAD TRANSIT PRIORITY EA DESIGN        |



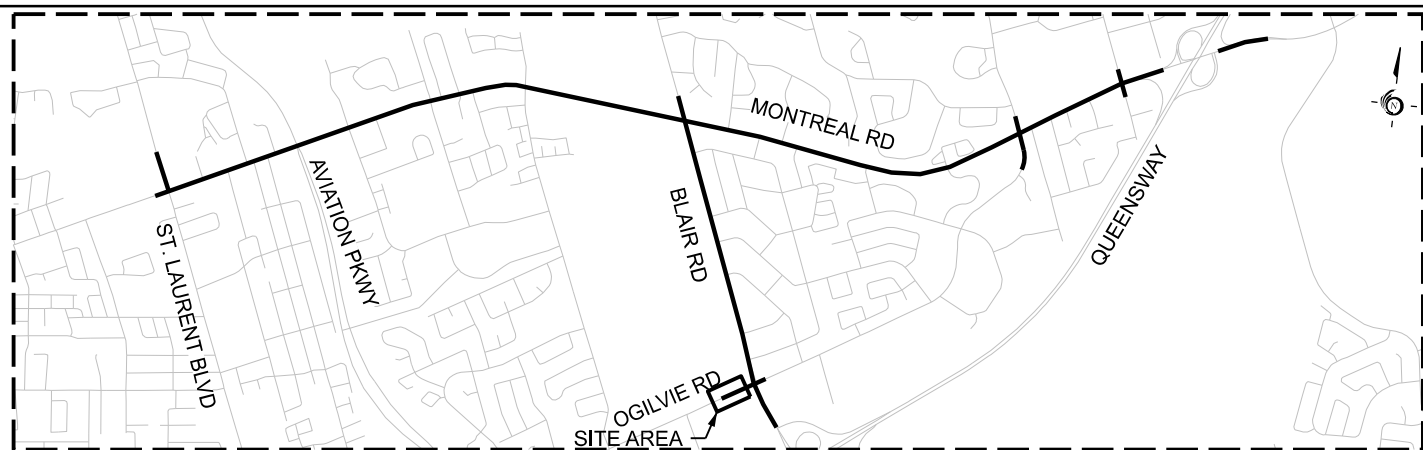
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| Project Manager:                     | Discipline Engineer: | Checked By: |
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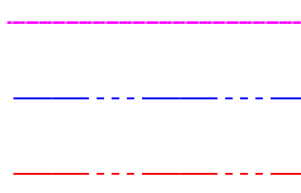
MONTREAL - BLAIR TRANSIT PRIORITY CORRIDOR  
STA. 11+680 to STA 11+860



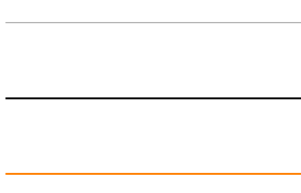
KEY PLAN



LEGEND



EXISTING PROPERTY LINE  
EXISTING ROW PROTECTION  
PROPOSED PROPERTY LINE



EXISTING CONDITIONS  
PROPOSED FUNCTIONAL DESIGN  
PROPOSED FUNCTIONAL DESIGN PAVEMENT MARKINGS

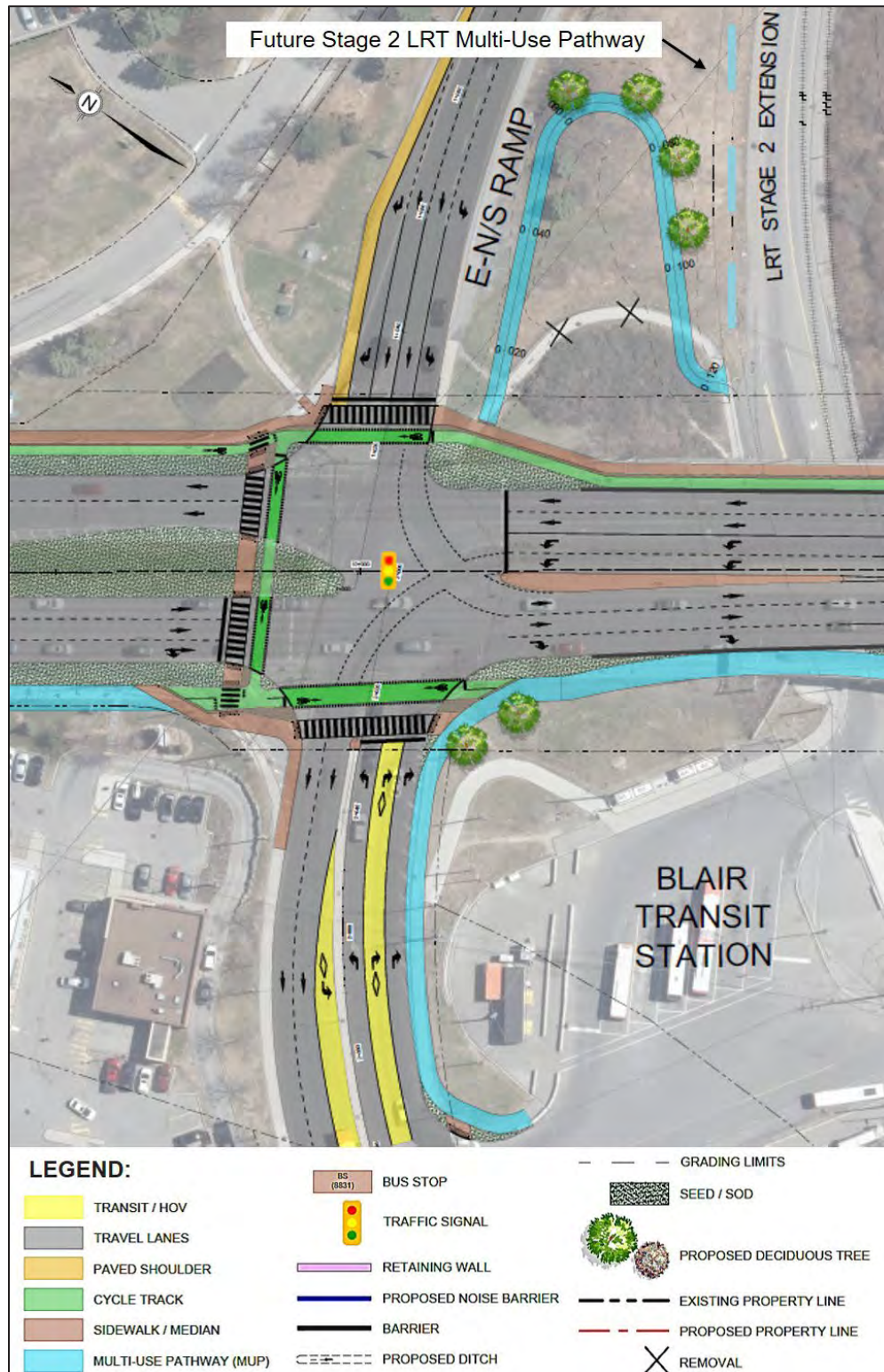


|                                         |                      |             |
|-----------------------------------------|----------------------|-------------|
| Date:<br>23 August 2021                 | Designed By:         | Drawn By:   |
| Project Manager:                        | Discipline Engineer: | Checked By: |
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| CAD File Name:<br>477003-2000-EA-47.DGN |                      | Plot Date:  |

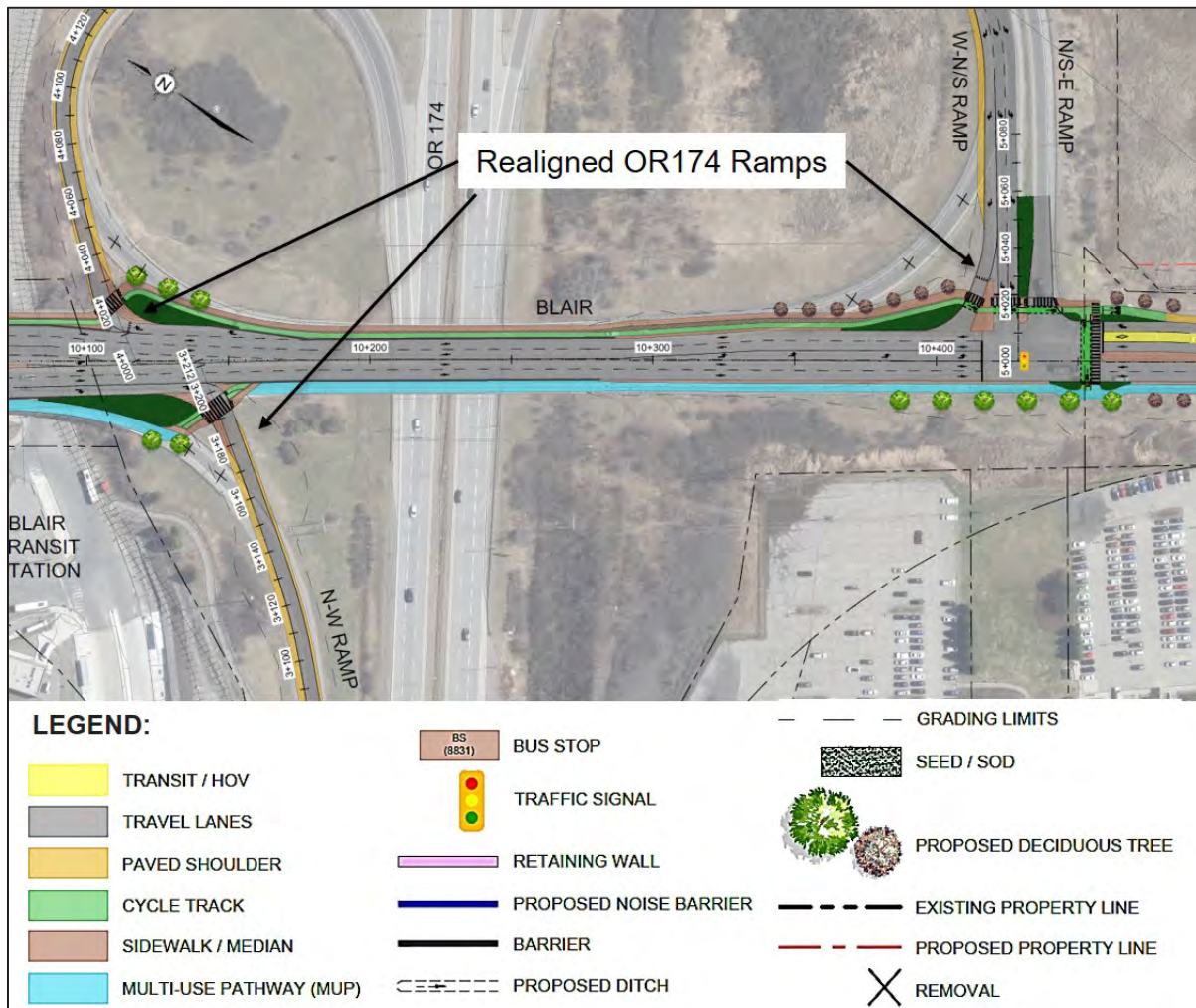


MONTREAL - BLAIR TRANSIT PRIORITY CORRIDOR  
OGILVIE ROAD

|               |                |                 |
|---------------|----------------|-----------------|
| Drawings No.: | Revision<br>00 | Sheet No.<br>47 |
|---------------|----------------|-----------------|



**Figure 9-5: Protected Intersection and Highlights at Blair Station**



**Figure 9-2: Realigned OR174 Interchange Ramps**

South of OR174, Blair Road currently transitions from four to two lanes just south of Meadowbrook Road. For the existing four lane section between OR174 and Meadowbrook Road, only minor widening is required and a conversion of the two outer general traffic lanes to transit and HOV lanes is proposed. The northbound transit/HOV lane terminates at the intersection south of OR174 to allow buses destined to Blair Station to weave across to the left lane. Further south between Meadowbrook Road and Innes Road, Blair Road is currently a two-lane road and widening to four lanes is recommended to accommodate dedicated transit and HOV lanes.

Of the cross-section alternatives considered for Blair Road from south of OR174 to Innes Road, Option 1 is recommended. The NCC Greenbelt is on the east side of Blair Road and this project proposes to maintain the existing east rural grading and ditching to preserve the rural character of the Greenbelt. On the west side of Blair Road, a 3.0 m MUP will extend from the OR174 bridge overpass to Innes Road and will provide direct access to the adjacent Pineview Community. A MUP on the west side is preferred as it accommodates bi-directional cycling and reduces the need for northbound cyclists to cross Blair Road. Design refinements to the Recommended Design that arose through

## **APPENDIX H**

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### Other Area Developments

January  
2019

# 2280 City Park Drive Residential Development

Plan of Subdivision - TIA Strategy Report



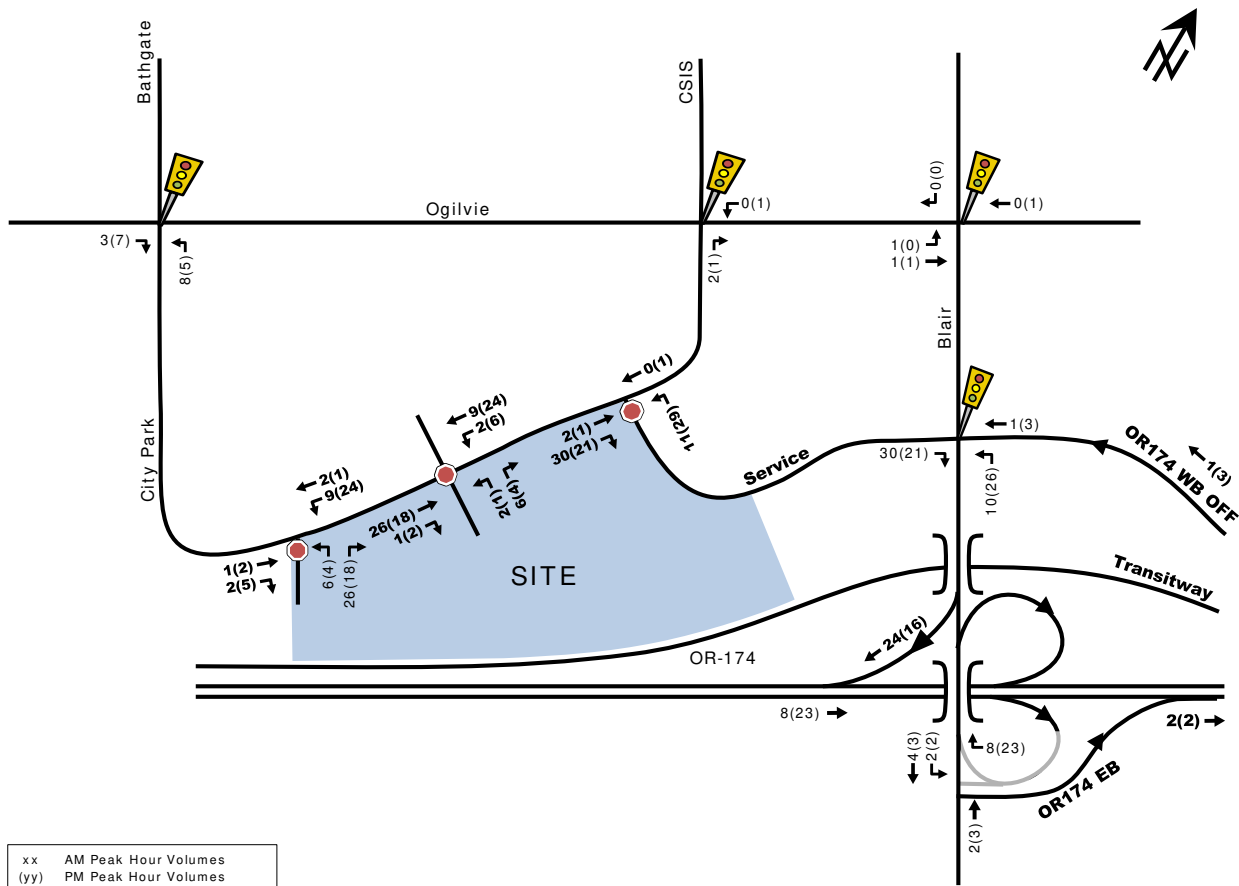
Prepared for:

RIO  CAN

Prepared by:

**PARSONS**

**Figure 9 : New Site-Generated Peak Hour Traffic Assignment**



## 10.BACKGROUND TRAFFIC NETWORK

## 10.1. TRANSPORTATION NETWORK CHANGES

Several notable transportation network changes are proposed within the study area as per the 2013 TMP - 2031 Affordable Network, they are listed as follows:

## Blair Road network changes

- Widen from two to four lanes between Meadowbrook Road and Innes Road;
- Exclusive bus lanes and transit signal priority between Blair Station and Montreal Road. Bus lanes to be provided through a combination of road widening (north of Ogilvie Road) and conversion of existing traffic lanes (south of Ogilvie Road);
- Transit signal priority and queue jump lanes between Innes Road and Blair Station; and
- Affordable: Eastern extension of LRT service following Ottawa Road 174 between Blair Station and Place d'Orléans Station.

## Ogilvie Road network changes

- Transit signal priority between Blair Road and St. Laurent Boulevard.

# 1980 Ogilvie Road Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Step 3 Forecasting Report

Step 4 Strategy Report

Prepared for:

First Capital Asset Management ULC  
RDC 113, 7600 Boulevard Viau  
Montreal, Quebec, H1S 2P3

Prepared by:



13 Markham Avenue  
Nepean, ON K2G 3Z1

September 2019

PN: 2018-30

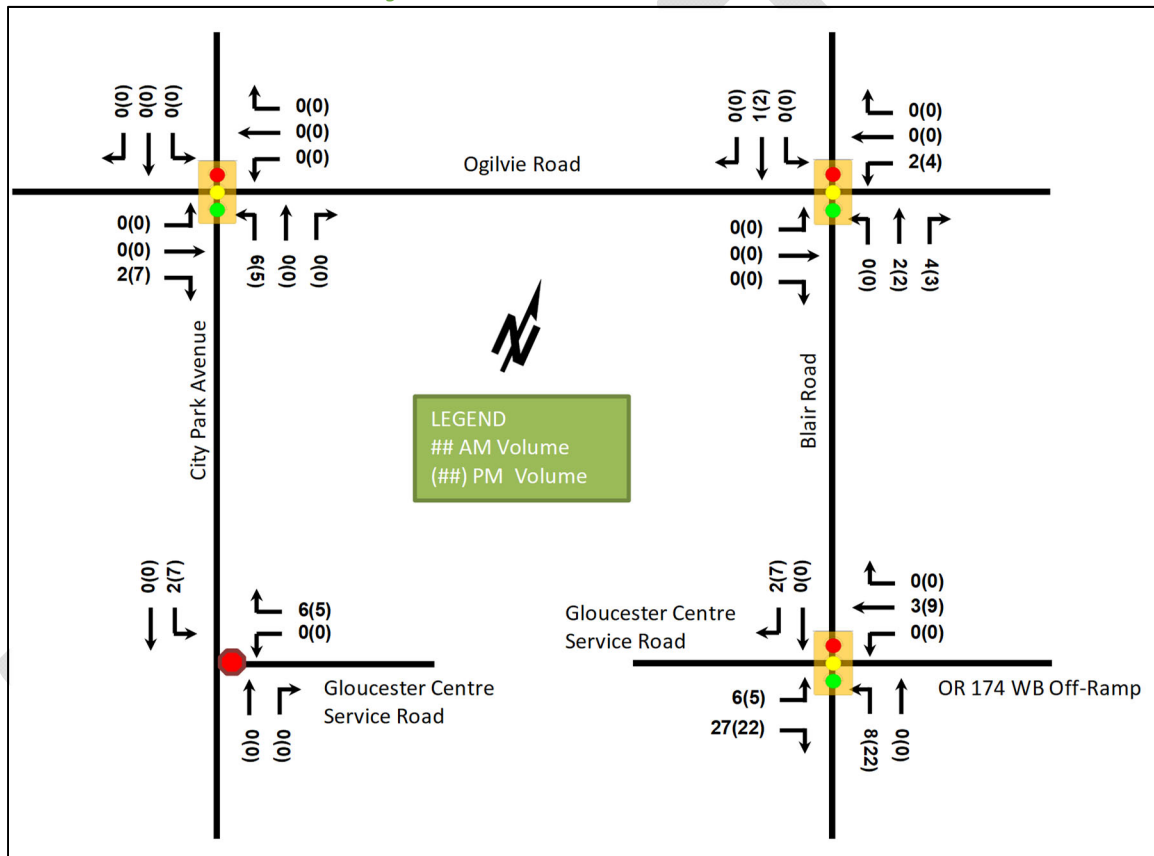
Table 13: OD Survey Existing Mode Share – Beacon Hill

| To/From | % of Trips |
|---------|------------|
| North   | 5%         |
| South   | 30%        |
| East    | 20%        |
| West    | 45%        |
| Total   | 100%       |

### 5.3 Trip Assignment

Using the distribution outlined above, turning movement splits, and access to major transportation infrastructure, the trips generated by the site have been assigned to the Study Area road network. Figure 9 illustrates the new site generated volumes.

Figure 9: New Site Generation Auto Volumes



## 6 Background Network Travel Demands

### 6.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3.1. The opening of the Blair LRT station, transit priority along Blair Road, and isolated transit measures to Innes Road have been accounted for within the modal share assumptions and will be reinforced by the opening of Phase 2. No road improvements are noted for the area.

The additional connectivity provided by the multi-use pathway along City Park Drive and the LRT line will improve the active mode network but is not anticipated to significantly impact the modal shares used in the future trip generation.



# Shoppers City East Redevelopment - Phase II

## Transportation Impact Study



Prepared for:

Prepared by:



TRINITY

PARSONS

Figure 6: Projected 2017 Baseline Traffic Volumes

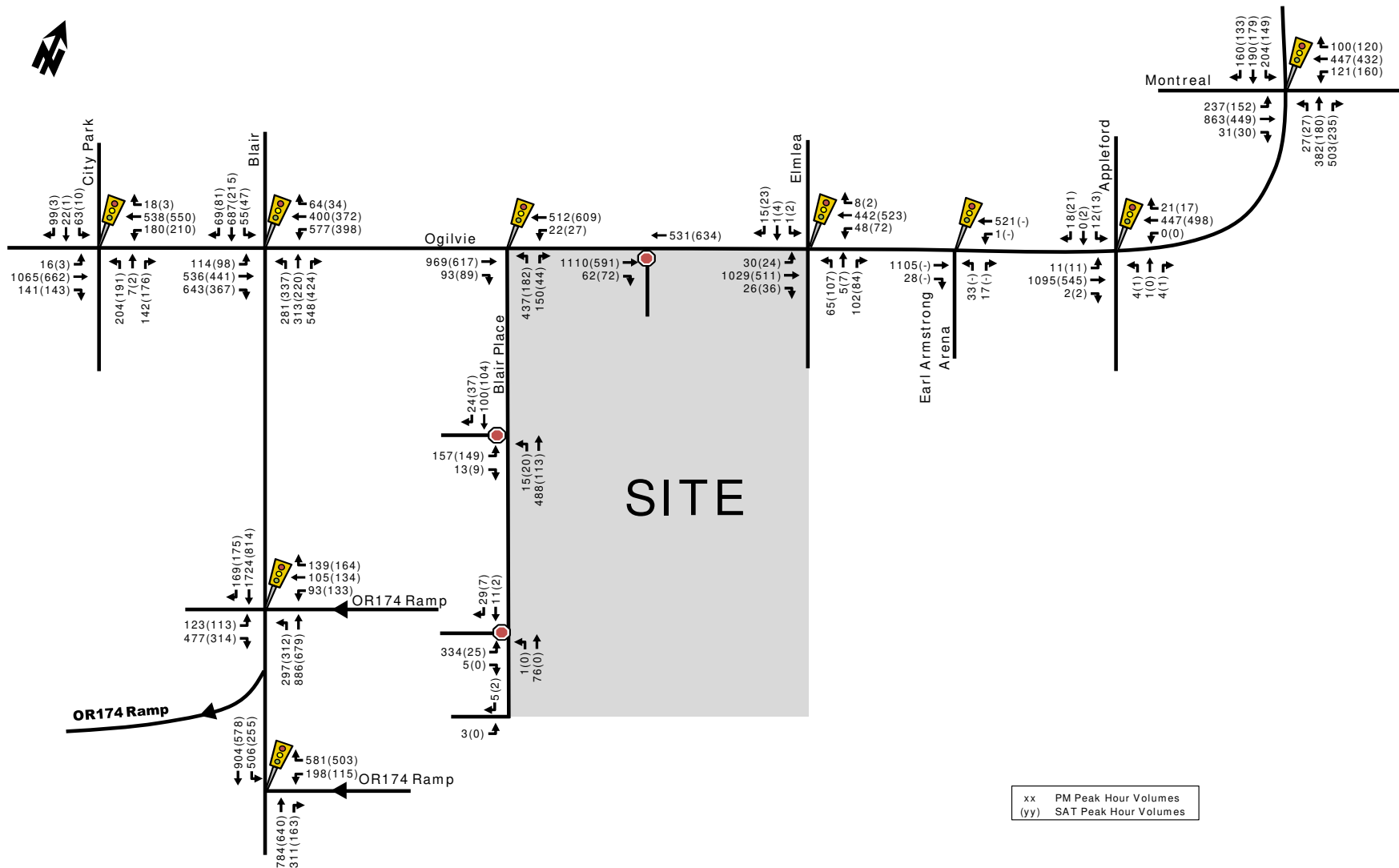
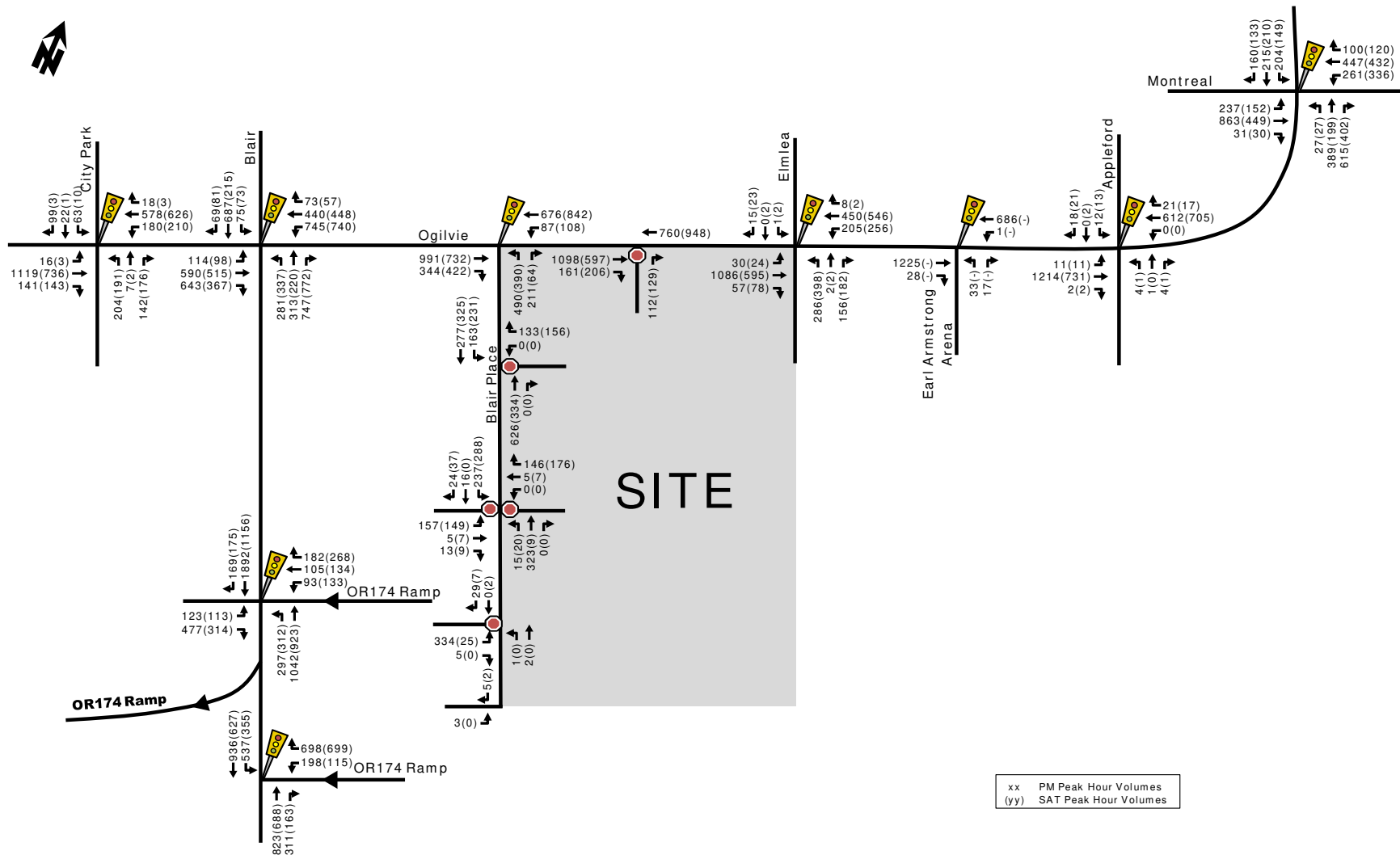


Figure 10: Total Projected 2017 Peak Hour Traffic Volumes



## **APPENDIX I**

---

### Strategic Long Range Model Snapshots

TRANS Regional Model

Version 2.15 - Assigned June 16, 2020

AM Peak Hour Total Traffic Volume

Ogilvie Road/Blair Road Area

2011 Model - Basecase

N/A

User Initials: TIMW

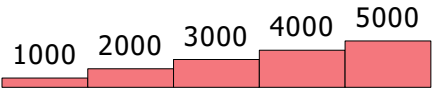
Plot Prepared: Jan 17, 2023

EMME Scenario: 21713

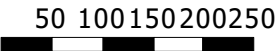


Legend

AM Peak Hour Total Traffic Volume



Distance (m)



The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

Recipients are required to use caution and professional judgement in using and interpreting model outputs. In particular, caution should be used when focusing on a geographically limited area (such as a single road or intersection), as the model is primarily designed to simulate regional-scale phenomena and has been calibrated at a regional level.

As general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

TRANS Regional Model

Version 2.15 - Assigned June 16, 2020

AM Peak Hour Total Traffic Volume  
Ogilvie Road/Blair Road Area

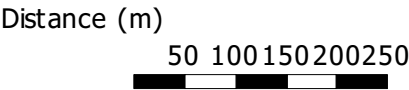
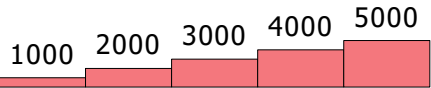
2031 Model - Basecase  
N/A

User Initials: TIMW  
Plot Prepared: Jan 17, 2023  
EMME Scenario: 21715



Legend

AM Peak Hour Total Traffic Volume



The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

Recipients are required to use caution and professional judgement in using and interpreting model outputs. In particular, caution should be used when focusing on a geographically limited area (such as a single road or intersection), as the model is primarily designed to simulate regional-scale phenomena and has been calibrated at a regional level.

As a general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

## **APPENDIX J**

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### Signal Timing Plans

# Traffic Signal Timing

City of Ottawa, Public Works Department

## Traffic Signal Operations Unit

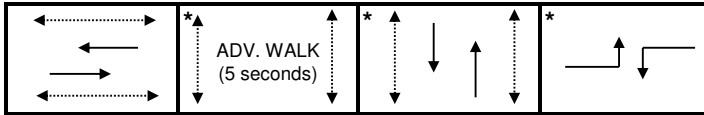
|                      |                      |                                       |
|----------------------|----------------------|---------------------------------------|
| <b>Intersection:</b> | <b>Main:</b> Ogilvie | <b>Side:</b> Bathgate / City Park (W) |
| <b>Controller:</b>   | <b>ATC 3</b>         | <b>TSD:</b> 5219                      |
| <b>Author:</b>       | Othman Benamrane     | <b>Date:</b> 18-Jan-2023              |

## Existing Timing Plans<sup>†</sup>

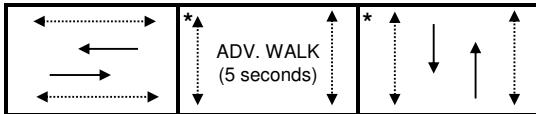
|               | Plan    |          |         |       |         |         |         | Ped Minimum Time |    |         |
|---------------|---------|----------|---------|-------|---------|---------|---------|------------------|----|---------|
|               | Morning | Off Peak | PM Peak | Night | Weekend | AM Peak | Evening | Walk             | DW | A+R     |
|               | 1       | 2        | 3       | 4     | 5       | 11      | 12      |                  |    |         |
| <b>Cycle</b>  | 90      | 90       | 100     | 80    | 90      | 100     | 90      |                  |    |         |
| <b>Offset</b> | 27      | 5        | 19      | X     | 5       | 29      | 5       |                  |    |         |
| EB Thru       | 32      | 32       | 37      | 37    | 32      | 42      | 32      | 9                | 15 | 3.7+2.3 |
| WB Thru       | 32      | 32       | 37      | 37    | 32      | 42      | 32      | 9                | 15 | 3.7+2.3 |
| NB Thru       | 43      | 43       | 43      | 43    | 43      | 43      | 43      | 7                | 28 | 3.0+4.4 |
| SB Thru       | 43      | 43       | 43      | 43    | 43      | 43      | 43      | 7                | 28 | 3.0+4.4 |
| EB Left       | 15      | 15       | 20      | -     | 15      | 15      | 15      | -                | -  | 3.7+1.0 |
| WB Left       | 15      | 15       | 20      | -     | 15      | 15      | 15      | -                | -  | 3.7+1.0 |

## Phasing Sequence<sup>‡</sup>

Plan: 1, 2, 3, 5, 11, 12



Plan: 4



## Schedule

### Weekday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 6:30  | 1    |
| 7:30  | 11   |
| 9:00  | 1    |
| 9:30  | 2    |
| 15:00 | 3    |
| 18:30 | 2    |
| 22:30 | 4    |

### Saturday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 8:30  | 5    |
| 19:00 | 2    |
| 22:30 | 4    |

### Sunday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 8:30  | 2    |
| 22:30 | 4    |

## Notes

<sup>†</sup>: Time for each direction includes amber and all red intervals

<sup>‡</sup>: Start of first phase should be used as reference point for offset

Asterisk (\*) Indicates actuated phase

(fp): Fully Protected Left Turn

◀.....▶ Pedestrian signal

Cost is \$61.16 (\$54.12 + HST)

# Traffic Signal Timing

City of Ottawa, Public Works Department

## Traffic Signal Operations Unit

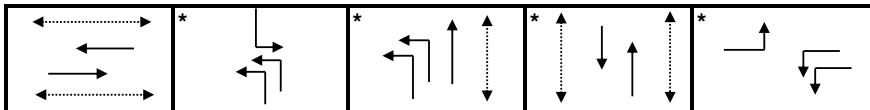
|                      |                      |                          |
|----------------------|----------------------|--------------------------|
| <b>Intersection:</b> | <i>Main:</i> Ogilvie | <i>Side:</i> Blair       |
| <b>Controller:</b>   | ATC3                 | <b>TSD:</b> 5300         |
| <b>Author:</b>       | Othman Benamrane     | <b>Date:</b> 18-Jan-2023 |

## Existing Timing Plans†

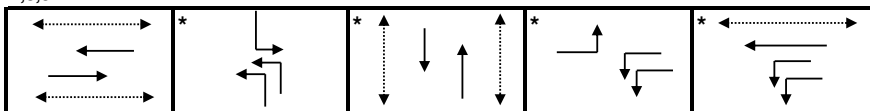
|               | Plan          |              |            |              |               | Ped Minimum Time |    |         |
|---------------|---------------|--------------|------------|--------------|---------------|------------------|----|---------|
|               | Off Peak<br>2 | PM Peak<br>3 | Night<br>4 | Weekend<br>5 | AM Peak<br>11 | Walk             | DW | A+R     |
| <b>Cycle</b>  | 130           | 140          | 110        | 130          | 140           |                  |    |         |
| <b>Offset</b> | X             | 0            | X          | 120          | X             |                  |    |         |
| EB Thru       | 39            | 41           | 40         | 39           | 39            | 7                | 25 | 3.3+3.3 |
| WB Thru       | 55            | 53           | 40         | 63           | 39            | 7                | 25 | 3.3+3.3 |
| NB Left (fp)  | 19            | 21           | 16         | 17           | 36            | -                | -  | 4.2+2.3 |
| SB Left (fp)  | 19            | 21           | 16         | 17           | 15            | -                | -  | 4.2+2.3 |
| NB Thru       | 35            | 41           | 38         | 35           | 58            | 7                | 22 | 4.2+2.3 |
| SB Thru       | 35            | 41           | 38         | 35           | 37            | 7                | 22 | 4.2+2.3 |
| EB Left (fp)  | 21            | 25           | 16         | 15           | 28            | -                | -  | 3.7+3.1 |
| WB Left (fp)  | 37            | 37           | 16         | 39           | 28            | -                | -  | 3.7+3.1 |

## Phasing Sequence‡

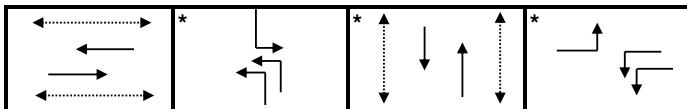
Plan: 11



Plan: 2,3,5



Plan: 4



## Schedule

### Weekday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 6:30  | 11   |
| 9:30  | 2    |
| 15:00 | 3    |
| 18:30 | 2    |
| 22:30 | 4    |

### Saturday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 7:00  | 5    |
| 22:00 | 4    |

### Sunday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 7:00  | 5    |
| 21:00 | 4    |

## Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (\*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄.....► Pedestrian signal

Cost is \$61.16 (\$54.12 + HST)

# Traffic Signal Timing

City of Ottawa, Public Works Department

## Traffic Signal Operations Unit

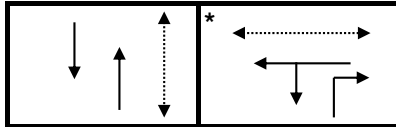
|                      |                    |                              |
|----------------------|--------------------|------------------------------|
| <b>Intersection:</b> | <b>Main:</b> Blair | <b>Side:</b> 174 EB Off Ramp |
| <b>Controller:</b>   | <b>ATC3</b>        | <b>TSD:</b> 5452             |
| <b>Author:</b>       | Othman Benamrane   | <b>Date:</b> 18-Jan-2023     |

## Existing Timing Plans†

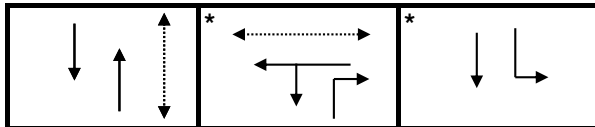
|               | Plan    |          |         |       |         | Ped Minimum Time |    |         |
|---------------|---------|----------|---------|-------|---------|------------------|----|---------|
|               | AM Peak | Off Peak | PM Peak | Night | Weekend | Walk             | DW | A+R     |
|               | 1       | 2        | 3       | 4     | 5       |                  |    |         |
| <b>Cycle</b>  | 90      | 90       | 110     | 75    | 90      |                  |    |         |
| <b>Offset</b> | X       | X        | 32      | X     | X       |                  |    |         |
| NB Thru       | 55      | 50       | 52      | 50    | 50      | 7                | 17 | 4.2+2.3 |
| SB Thru       | 55      | 50       | 80      | 50    | 50      | -                | -  | 4.2+2.3 |
| WB Thru/Left  | 35      | 25       | 30      | 25    | 25      | 7                | 12 | 3.3+3.0 |
| NB Right      | 35      | 25       | 30      | 25    | 25      | -                | -  | 3.3+3.0 |
| SB Left       | -       | 15       | 28      | -     | 15      | -                | -  | 4.2+1.8 |

## Phasing Sequence‡

Plan: 1,4



Plan: 2,3,5



## Schedule

### Weekday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 6:30  | 1    |
| 9:30  | 2    |
| 15:00 | 3    |
| 18:30 | 2    |
| 22:30 | 4    |

### Saturday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 7:00  | 5    |
| 22:00 | 4    |

### Sunday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 7:00  | 5    |
| 21:00 | 4    |

## Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (\*) Indicates actuated phase

(fp): Fully Protected Left Turn

◀.....▶ Pedestrian signal

# Traffic Signal Timing

City of Ottawa, Public Works Department

## Traffic Signal Operations Unit

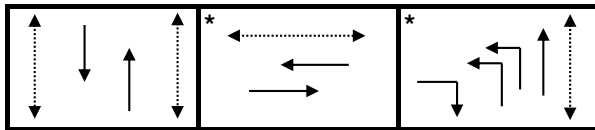
|                      |                    |                              |
|----------------------|--------------------|------------------------------|
| <b>Intersection:</b> | <b>Main:</b> Blair | <b>Side:</b> 174 WB Off Ramp |
| <b>Controller:</b>   | ATC3               | <b>TSD:</b> 5867             |
| <b>Author:</b>       | Othman Benamrane   | <b>Date:</b> 18-Jan-2023     |

## Existing Timing Plans<sup>†</sup>

|               | Plan    |          |         |       |         | Ped Minimum Time |    |         |
|---------------|---------|----------|---------|-------|---------|------------------|----|---------|
|               | AM Peak | Off Peak | PM Peak | Night | Weekend | Walk             | DW | A+R     |
|               | 1       | 2        | 3       | 4     | 5       |                  |    |         |
| <b>Cycle</b>  | 100     | 95       | 130     | 85    | 95      |                  |    |         |
| <b>Offset</b> | X       | X        | 50      | X     | X       |                  |    |         |
| NB Thru       | 32      | 34       | 94      | 34    | 32      | 7                | 17 | 4.2+1.9 |
| SB Thru       | 32      | 34       | 63      | 34    | 32      | 7                | 17 | 4.2+1.9 |
| EB Thru       | 41      | 36       | 36      | 36    | 36      | -                | -  | 3.3+3.5 |
| WB Thru       | 41      | 36       | 36      | 36    | 36      | 7                | 23 | 3.3+3.5 |
| NB Left (fp)  | 27      | 25       | 31      | 15    | 27      | -                | -  | 4.2+2.2 |
| EB Right      | 27      | 25       | 31      | 15    | 27      | -                | -  | 4.2+2.2 |

## Phasing Sequence<sup>‡</sup>

Plan: All



- Notes:** 1) For plan 4, if the EW pedestrian phase is not actuated, the WB phase will force off after 10s  
2) For all other plans, if EW pedestrian phase is not actuated, the WB phase will force off after 20s

## Schedule

| Weekday |      | Saturday |      | Sunday |      |
|---------|------|----------|------|--------|------|
| Time    | Plan | Time     | Plan | Time   | Plan |
| 0:15    | 4    | 0:15     | 4    | 0:15   | 4    |
| 6:30    | 1    | 7:00     | 5    | 7:00   | 5    |
| 9:30    | 2    | 22:00    | 4    | 21:00  | 4    |
| 15:00   | 3    |          |      |        |      |
| 18:30   | 2    |          |      |        |      |
| 22:30   | 4    |          |      |        |      |

## Notes

†: Time for each direction includes amber and all red intervals  
‡: Start of first phase should be used as reference point for offset  
Asterisk (\*) Indicates actuated phase  
(fp): Fully Protected Left Turn  
◀.....▶ Pedestrian signal

Cost is \$61.16 (\$54.12 + HST)

# Traffic Signal Timing

City of Ottawa, Public Works Department

## Traffic Signal Operations Unit

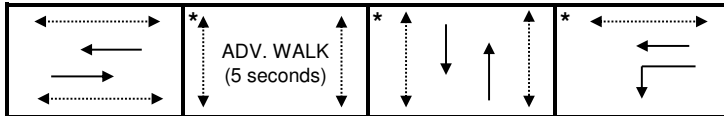
|                      |                      |                               |
|----------------------|----------------------|-------------------------------|
| <b>Intersection:</b> | <i>Main:</i> Ogilvie | <i>Side:</i> City Park (East) |
| <b>Controller:</b>   | MS 3200              | <b>TSD:</b> 5883              |
| <b>Author:</b>       | Othman Benamrane     | <b>Date:</b> 18-Jan-2023      |

## Existing Timing Plans†

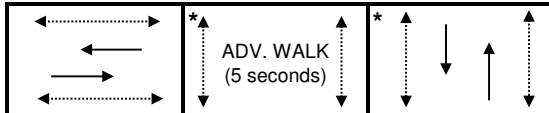
|               | Plan         |               |              |            |              |               |               | Ped Minimum Time |    |         |
|---------------|--------------|---------------|--------------|------------|--------------|---------------|---------------|------------------|----|---------|
|               | Morning<br>1 | Off Peak<br>2 | PM Peak<br>3 | Night<br>4 | Weekend<br>5 | AM Peak<br>11 | Evening<br>12 | Walk             | DW | A+R     |
| <b>Cycle</b>  | 90           | 90            | 100          | 75         | 90           | 100           | 90            |                  |    |         |
| <b>Offset</b> | 88           | 12            | 30           | X          | 12           | 13            | 12            |                  |    |         |
| EB Thru       | 51           | 36            | 46           | 36         | 36           | 61            | 36            | 7                | 22 | 3.7+2.4 |
| WB Thru       | 51           | 51            | 61           | 36         | 51           | 61            | 51            | 7                | 22 | 3.7+2.4 |
| NB Thru       | 39           | 39            | 39           | 39         | 39           | 39            | 39            | 7                | 25 | 3.3+3.2 |
| SB Thru       | 39           | 39            | 39           | 39         | 39           | 39            | 39            | 7                | 25 | 3.3+3.2 |
| WB Left       | -            | 15            | 15           | -          | 15           | -             | 15            | -                | -  | 3.0+1.0 |

## Phasing Sequence‡

Plan: 2, 3, 5, 12



Plan: 1, 4, 11



## Schedule

### Weekday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 6:30  | 1    |
| 7:30  | 11   |
| 9:00  | 1    |
| 9:30  | 2    |
| 15:00 | 3    |
| 18:30 | 12   |
| 22:30 | 4    |

### Saturday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 8:30  | 5    |
| 19:00 | 2    |
| 22:30 | 4    |

### Sunday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 8:30  | 2    |
| 22:30 | 4    |

## Notes

†: Time for each direction includes amber and all red intervals  
‡: Start of first phase should be used as reference point for offset  
Asterisk (\*) Indicates actuated phase  
(fp): Fully Protected Left Turn  
◄.....► Pedestrian signal

Cost is \$61.16 (\$54.12 + HST)

# Traffic Signal Timing

City of Ottawa, Public Works Department

## Traffic Signal Operations Unit

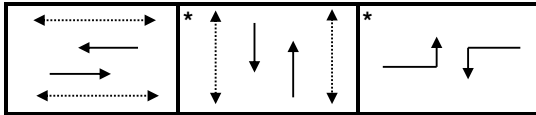
|                      |                      |                                    |
|----------------------|----------------------|------------------------------------|
| <b>Intersection:</b> | <b>Main:</b> Ogilvie | <b>Side:</b> Matheson / Palmerston |
| <b>Controller:</b>   | <b>MS 3200</b>       | <b>TSD:</b> 6140                   |
| <b>Author:</b>       | Othman Benamrane     | <b>Date:</b> 18-Jan-2023           |

## Existing Timing Plans†

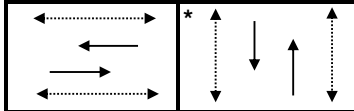
|               | Plan    |          |         |       |         |         |         | Ped Minimum Time |    |         |
|---------------|---------|----------|---------|-------|---------|---------|---------|------------------|----|---------|
|               | Morning | Off Peak | PM Peak | Night | Weekend | AM Peak | Evening | Walk             | DW | A+R     |
|               | 1       | 2        | 3       | 4     | 5       | 11      | 12      |                  |    |         |
| <b>Cycle</b>  | 90      | 90       | 120     | 80    | 90      | 100     | 90      |                  |    |         |
| <b>Offset</b> | 48      | 50       | 50      | X     | 50      | 54      | 50      |                  |    |         |
| EB Thru       | 40      | 40       | 65      | 40    | 40      | 47      | 50      | 15               | 13 | 3.7+1.9 |
| WB Thru       | 40      | 40       | 65      | 40    | 40      | 47      | 50      | 15               | 13 | 3.7+1.9 |
| NB Thru       | 40      | 40       | 40      | 40    | 40      | 40      | 40      | 7                | 26 | 3.0+4.2 |
| SB Thru       | 40      | 40       | 40      | 40    | 40      | 40      | 40      | 7                | 26 | 3.0+4.2 |
| EB Left       | 10      | 10       | 15      | -     | 10      | 13      | -       | -                | -  | 3.7+1.0 |
| WB Left       | 10      | 10       | 15      | -     | 10      | 13      | -       | -                | -  | 3.7+1.0 |

## Phasing Sequence‡

Plan: 1, 2, 3, 5, 11



Plan: 4, 12



## Schedule

| Weekday |      | Saturday |      | Sunday |      |
|---------|------|----------|------|--------|------|
| Time    | Plan | Time     | Plan | Time   | Plan |
| 0:15    | 4    | 0:15     | 4    | 0:15   | 4    |
| 6:30    | 1    | 8:30     | 5    | 8:30   | 2    |
| 7:30    | 11   | 19:00    | 2    | 22:30  | 4    |
| 9:00    | 1    | 22:30    | 4    |        |      |
| 9:30    | 2    |          |      |        |      |
| 15:00   | 3    |          |      |        |      |
| 18:30   | 12   |          |      |        |      |
| 22:30   | 4    |          |      |        |      |

## Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (\*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄.....► Pedestrian signal

Cost is \$61.16 (\$54.12 + HST)

# Traffic Signal Timing

City of Ottawa, Public Works Department

## Traffic Signal Operations Unit

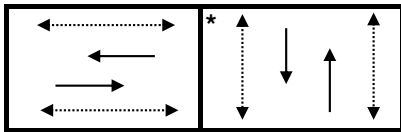
|                      |                      |                          |
|----------------------|----------------------|--------------------------|
| <b>Intersection:</b> | <i>Main:</i> Ogilvie | <i>Side:</i> Silver City |
| <b>Controller:</b>   | <b>MS 3200</b>       | <b>TSD: 6427</b>         |
| <b>Author:</b>       | Othman Benamrane     | <b>Date:</b> 18-Jan-2023 |

## Existing Timing Plans<sup>†</sup>

|         | Plan         |               |              |            |              |               | Ped Minimum Time |      |    |         |
|---------|--------------|---------------|--------------|------------|--------------|---------------|------------------|------|----|---------|
|         | Morning<br>1 | Off Peak<br>2 | PM Peak<br>3 | Night<br>4 | Weekend<br>5 | AM Peak<br>11 | Evening<br>12    | Walk | DW | A+R     |
| Cycle   | 90           | 90            | 100          | 75         | 90           | 100           | 90               |      |    |         |
| Offset  | 12           | 88            | 8            | X          | 88           | 12            | 88               |      |    |         |
|         |              |               |              |            |              |               |                  |      |    |         |
| EB Thru | 53           | 53            | 63           | 38         | 53           | 63            | 53               | 11   | 13 | 3.7+2.2 |
| WB Thru | 53           | 53            | 63           | 38         | 53           | 63            | 53               | 11   | 13 | 3.7+2.2 |
| NB Thru | 37           | 37            | 37           | 37         | 37           | 37            | 37               | 7    | 23 | 3.3+3.4 |
| SB Thru | 37           | 37            | 37           | 37         | 37           | 37            | 37               | 7    | 23 | 3.3+3.4 |

## Phasing Sequence<sup>‡</sup>

Plan: All



**Notes:** 1) If the NS pedestrian phase is not actuated, the NS phases will force off after 25s

## Schedule

### Weekday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 6:30  | 1    |
| 7:30  | 11   |
| 9:00  | 1    |
| 9:30  | 2    |
| 15:00 | 3    |
| 18:30 | 12   |
| 22:30 | 4    |

### Saturday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 8:30  | 5    |
| 19:00 | 2    |
| 22:30 | 4    |

### Sunday

| Time  | Plan |
|-------|------|
| 0:15  | 4    |
| 8:30  | 2    |
| 22:30 | 4    |

## Notes

<sup>†</sup>: Time for each direction includes amber and all red intervals

<sup>‡</sup>: Start of first phase should be used as reference point for offset

Asterisk (\*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄.....► Pedestrian signal

Cost is \$61.16 (\$54.12 + HST)

## **APPENDIX K**

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Detailed Analysis Reports

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

Existing AM

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 75                                                                                | 339                                                                               | 171                                                                               | 416                                                                               | 613                                                                               | 36                                                                                | 566                                                                                 | 580                                                                                 | 369                                                                                 | 43                                                                                  | 292                                                                                 | 97                                                                                  |
| Future Volume (vph)        | 75                                                                                | 339                                                                               | 171                                                                               | 416                                                                               | 613                                                                               | 36                                                                                | 566                                                                                 | 580                                                                                 | 369                                                                                 | 43                                                                                  | 292                                                                                 | 97                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 110.0                                                                             |                                                                                   | 0.0                                                                               | 120.0                                                                               |                                                                                     | 0.0                                                                                 | 30.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 0                                                                                 | 2                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 40.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.97                                                                              | 0.95                                                                              | 0.95                                                                              | 0.97                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.99                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.992                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     | 0.962                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3316                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3187                                                                                | 0                                                                                   |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3316                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3187                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 190                                                                               |                                                                                   | 4                                                                                 |                                                                                   |                                                                                     |                                                                                     | 285                                                                                 |                                                                                     | 30                                                                                  |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                   | 396.5                                                                             |                                                                                   |                                                                                     | 239.9                                                                               |                                                                                     |                                                                                     | 411.0                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                   | 23.8                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 25                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 27                                                                                  |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 3                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 3                                                                                   |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 83                                                                                | 377                                                                               | 190                                                                               | 462                                                                               | 681                                                                               | 40                                                                                | 629                                                                                 | 644                                                                                 | 410                                                                                 | 48                                                                                  | 324                                                                                 | 108                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 83                                                                                | 377                                                                               | 190                                                                               | 462                                                                               | 721                                                                               | 0                                                                                 | 629                                                                                 | 644                                                                                 | 410                                                                                 | 48                                                                                  | 432                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

Existing AM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                |                                                                                   | Prot                                                                                | NA                                                                                  | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   | 3                                                                                   | 8                                                                                   |                                                                                     | 7                                                                                   | 4                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 |                                                                                   | 3                                                                                   | 8                                                                                   | 8                                                                                   | 7                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              |                                                                                   | 5.0                                                                                 | 10.0                                                                                | 10.0                                                                                | 5.0                                                                                 | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 11.8                                                                              | 38.6                                                                              | 38.6                                                                              | 11.8                                                                              | 38.6                                                                              |                                                                                   | 11.5                                                                                | 35.5                                                                                | 35.5                                                                                | 11.5                                                                                | 35.5                                                                                |                                                                                     |
| Total Split (s)         | 28.0                                                                              | 39.0                                                                              | 39.0                                                                              | 28.0                                                                              | 39.0                                                                              |                                                                                   | 36.0                                                                                | 58.0                                                                                | 58.0                                                                                | 15.0                                                                                | 37.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 27.9%                                                                             | 27.9%                                                                             | 20.0%                                                                             | 27.9%                                                                             |                                                                                   | 25.7%                                                                               | 41.4%                                                                               | 41.4%                                                                               | 10.7%                                                                               | 26.4%                                                                               |                                                                                     |
| Maximum Green (s)       | 21.2                                                                              | 32.4                                                                              | 32.4                                                                              | 21.2                                                                              | 32.4                                                                              |                                                                                   | 29.5                                                                                | 51.5                                                                                | 51.5                                                                                | 8.5                                                                                 | 30.5                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.3                                                                               | 3.3                                                                               | 3.7                                                                               | 3.3                                                                               |                                                                                   | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 3.1                                                                               | 3.3                                                                               | 3.3                                                                               | 3.1                                                                               | 3.3                                                                               |                                                                                   | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 6.8                                                                               | 6.6                                                                               | 6.6                                                                               | 6.8                                                                               | 6.6                                                                               |                                                                                   | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                                | Lag                                                                                 | Lag                                                                                 | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               |                                                                                   | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | Max                                                                               | Max                                                                               | None                                                                              | Max                                                                               |                                                                                   | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                     | 7.0                                                                                 | 7.0                                                                                 |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                     | 22.0                                                                                | 22.0                                                                                |                                                                                     | 22.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 20                                                                                | 20                                                                                |                                                                                   | 20                                                                                |                                                                                   |                                                                                     | 25                                                                                  | 25                                                                                  |                                                                                     | 25                                                                                  |                                                                                     |
| Act Effect Green (s)    | 12.1                                                                              | 32.5                                                                              | 32.5                                                                              | 20.9                                                                              | 41.3                                                                              |                                                                                   | 28.4                                                                                | 51.5                                                                                | 51.5                                                                                | 7.8                                                                                 | 28.2                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.09                                                                              | 0.24                                                                              | 0.24                                                                              | 0.15                                                                              | 0.30                                                                              |                                                                                   | 0.21                                                                                | 0.38                                                                                | 0.38                                                                                | 0.06                                                                                | 0.21                                                                                |                                                                                     |
| v/c Ratio               | 0.56                                                                              | 0.47                                                                              | 0.38                                                                              | 0.93                                                                              | 0.72                                                                              |                                                                                   | 0.93                                                                                | 0.97                                                                                | 0.55                                                                                | 0.51                                                                                | 0.63                                                                                |                                                                                     |
| Control Delay           | 74.3                                                                              | 47.7                                                                              | 8.1                                                                               | 83.0                                                                              | 48.3                                                                              |                                                                                   | 74.1                                                                                | 69.8                                                                                | 13.2                                                                                | 82.3                                                                                | 50.5                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 74.3                                                                              | 47.7                                                                              | 8.1                                                                               | 83.0                                                                              | 48.3                                                                              |                                                                                   | 74.1                                                                                | 69.8                                                                                | 13.2                                                                                | 82.3                                                                                | 50.5                                                                                |                                                                                     |
| LOS                     | E                                                                                 | D                                                                                 | A                                                                                 | F                                                                                 | D                                                                                 |                                                                                   | E                                                                                   | E                                                                                   | B                                                                                   | F                                                                                   | D                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 39.5                                                                              |                                                                                   |                                                                                   | 61.8                                                                              |                                                                                   |                                                                                     | 57.6                                                                                |                                                                                     |                                                                                     | 53.7                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | E                                                                                 |                                                                                   |                                                                                     | E                                                                                   |                                                                                     |                                                                                     | D                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 136.5

Natural Cycle: 130

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 55.4

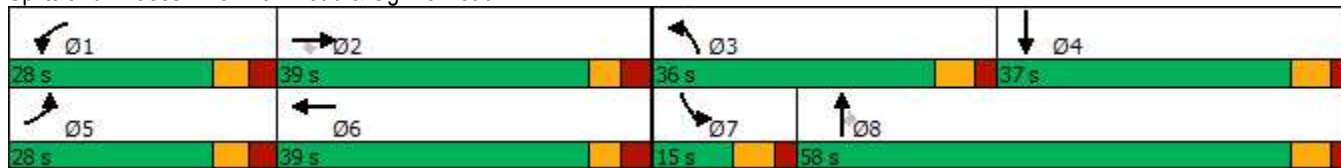
Intersection LOS: E

Intersection Capacity Utilization 89.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Blair Road & Ogilvie Road



1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

Existing AM

|                            |  |       |       |       |       |       |       |       |       |      |       |       |
|----------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Group                 | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL  | SBT   | SBR   |
| Lane Configurations        |                                                                                    |       |       |       |       |       |       |       |       |      |       |       |
| Traffic Volume (vph)       | 81                                                                                 | 0     | 290   | 101   | 146   | 266   | 256   | 1276  | 0     | 0    | 760   | 107   |
| Future Volume (vph)        | 81                                                                                 | 0     | 290   | 101   | 146   | 266   | 256   | 1276  | 0     | 0    | 760   | 107   |
| Ideal Flow (vphpl)         | 1800                                                                               | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800 | 1800  | 1800  |
| Storage Length (m)         | 0.0                                                                                |       | 70.0  | 0.0   |       | 70.0  | 60.0  |       | 0.0   | 0.0  |       | 50.0  |
| Storage Lanes              | 1                                                                                  |       | 1     | 1     |       | 1     | 2     |       | 0     | 0    |       | 1     |
| Taper Length (m)           | 7.6                                                                                |       |       | 7.6   |       |       | 100.0 |       |       | 7.6  |       |       |
| Lane Util. Factor          | 1.00                                                                               | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 0.97  | 0.95  | 1.00  | 1.00 | 0.91  | 1.00  |
| Frt                        |                                                                                    |       | 0.850 |       |       | 0.850 |       |       |       |      |       | 0.850 |
| Flt Protected              | 0.950                                                                              |       |       | 0.950 |       |       | 0.950 |       |       |      |       |       |
| Satd. Flow (prot)          | 1340                                                                               | 0     | 1199  | 1695  | 1784  | 1517  | 3164  | 3262  | 0     | 0    | 4732  | 1473  |
| Flt Permitted              | 0.654                                                                              |       |       | 0.950 |       |       | 0.950 |       |       |      |       |       |
| Satd. Flow (perm)          | 923                                                                                | 0     | 1199  | 1695  | 1784  | 1517  | 3164  | 3262  | 0     | 0    | 4732  | 1473  |
| Right Turn on Red          |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |      |       | Yes   |
| Satd. Flow (RTOR)          |                                                                                    |       | 34    |       |       | 104   |       |       |       |      |       | 119   |
| Link Speed (k/h)           |                                                                                    | 60    |       |       | 60    |       |       | 60    |       |      | 60    |       |
| Link Distance (m)          |                                                                                    | 518.9 |       |       | 416.4 |       |       | 90.2  |       |      | 239.9 |       |
| Travel Time (s)            |                                                                                    | 31.1  |       |       | 25.0  |       |       | 5.4   |       |      | 14.4  |       |
| Peak Hour Factor           | 0.90                                                                               | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90 | 0.90  | 0.90  |
| Heavy Vehicles (%)         | 29%                                                                                | 29%   | 29%   | 2%    | 2%    | 2%    | 6%    | 6%    | 6%    | 5%   | 5%    | 5%    |
| Adj. Flow (vph)            | 90                                                                                 | 0     | 322   | 112   | 162   | 296   | 284   | 1418  | 0     | 0    | 844   | 119   |
| Shared Lane Traffic (%)    |                                                                                    |       |       |       |       |       |       |       |       |      |       |       |
| Lane Group Flow (vph)      | 90                                                                                 | 0     | 322   | 112   | 162   | 296   | 284   | 1418  | 0     | 0    | 844   | 119   |
| Enter Blocked Intersection | No                                                                                 | No    | No    | No    | No    | No    | No    | No    | No    | No   | No    | No    |
| Lane Alignment             | Left                                                                               | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left | Left  | Right |
| Median Width(m)            |                                                                                    | 3.7   |       |       | 3.7   |       |       | 7.4   |       |      | 7.4   |       |
| Link Offset(m)             |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |      | 0.0   |       |
| Crosswalk Width(m)         |                                                                                    | 4.9   |       |       | 4.9   |       |       | 4.9   |       |      | 4.9   |       |
| Two way Left Turn Lane     |                                                                                    |       |       |       |       |       |       |       |       |      |       |       |
| Headway Factor             | 1.06                                                                               | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06 | 1.06  | 1.06  |
| Turning Speed (k/h)        | 24                                                                                 |       | 14    | 24    |       | 14    | 24    |       | 14    | 24   |       | 14    |
| Number of Detectors        | 1                                                                                  |       | 1     | 1     | 2     | 1     | 1     | 2     |       |      | 2     | 1     |
| Detector Template          | Left                                                                               |       | Right | Left  | Thru  | Right | Left  | Thru  |       |      | Thru  | Right |
| Leading Detector (m)       | 6.1                                                                                |       | 6.1   | 6.1   | 30.5  | 6.1   | 6.1   | 30.5  |       |      | 30.5  | 6.1   |
| Trailing Detector (m)      | 0.0                                                                                |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |      | 0.0   | 0.0   |
| Detector 1 Position(m)     | 0.0                                                                                |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |      | 0.0   | 0.0   |
| Detector 1 Size(m)         | 6.1                                                                                |       | 6.1   | 6.1   | 1.8   | 6.1   | 6.1   | 1.8   |       |      | 1.8   | 6.1   |
| Detector 1 Type            | Cl+Ex                                                                              |       | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       |      | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |                                                                                    |       |       |       |       |       |       |       |       |      |       |       |
| Detector 1 Extend (s)      | 0.0                                                                                |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |      | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0                                                                                |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |      | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0                                                                                |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |      | 0.0   | 0.0   |
| Detector 2 Position(m)     |                                                                                    |       |       |       | 28.7  |       |       | 28.7  |       |      | 28.7  |       |
| Detector 2 Size(m)         |                                                                                    |       |       |       | 1.8   |       |       | 1.8   |       |      | 1.8   |       |
| Detector 2 Type            |                                                                                    |       |       |       | Cl+Ex |       |       | Cl+Ex |       |      | Cl+Ex |       |
| Detector 2 Channel         |                                                                                    |       |       |       |       |       |       |       |       |      |       |       |
| Detector 2 Extend (s)      |                                                                                    |       |       |       | 0.0   |       |       | 0.0   |       |      | 0.0   |       |
| Turn Type                  | Perm                                                                               |       | pm+ov | Perm  | NA    | Perm  | Prot  | NA    |       |      | NA    | Perm  |
| Protected Phases           |                                                                                    |       | 5     |       | 8     |       | 5     | 2     |       |      | 6     |       |

1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

Existing AM

| Lane Group              | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL | SBT   | SBR   |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Permitted Phases        | 4     |      | 4     | 8     |       | 8     |       |       |     |     |       | 6     |
| Detector Phase          | 4     |      | 5     | 8     | 8     | 8     | 5     | 2     |     |     | 6     | 6     |
| Switch Phase            |       |      |       |       |       |       |       |       |     |     |       |       |
| Minimum Initial (s)     | 10.0  |      | 5.0   | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  |     |     | 10.0  | 10.0  |
| Minimum Split (s)       | 16.8  |      | 11.4  | 36.8  | 36.8  | 36.8  | 11.4  | 30.1  |     |     | 30.1  | 30.1  |
| Total Split (s)         | 41.0  |      | 27.0  | 41.0  | 41.0  | 41.0  | 27.0  | 59.0  |     |     | 32.0  | 32.0  |
| Total Split (%)         | 41.0% |      | 27.0% | 41.0% | 41.0% | 41.0% | 27.0% | 59.0% |     |     | 32.0% | 32.0% |
| Maximum Green (s)       | 34.2  |      | 20.6  | 34.2  | 34.2  | 34.2  | 20.6  | 52.9  |     |     | 25.9  | 25.9  |
| Yellow Time (s)         | 3.3   |      | 4.2   | 3.3   | 3.3   | 3.3   | 4.2   | 4.2   |     |     | 4.2   | 4.2   |
| All-Red Time (s)        | 3.5   |      | 2.2   | 3.5   | 3.5   | 3.5   | 2.2   | 1.9   |     |     | 1.9   | 1.9   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.8   |      | 6.4   | 6.8   | 6.8   | 6.8   | 6.4   | 6.1   |     |     | 6.1   | 6.1   |
| Lead/Lag                |       |      | Lead  |       |       |       | Lead  |       |     |     | Lag   | Lag   |
| Lead-Lag Optimize?      |       |      | Yes   |       |       |       | Yes   |       |     |     | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |     | 3.0   | 3.0   |
| Recall Mode             | None  |      | None  | None  | None  | None  | None  | Max   |     |     | Max   | Max   |
| Walk Time (s)           |       |      |       | 7.0   | 7.0   | 7.0   |       | 7.0   |     |     | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |      |       | 23.0  | 23.0  | 23.0  |       | 17.0  |     |     | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |       |      |       | 20    | 20    | 20    |       | 20    |     |     | 20    | 20    |
| Act Effct Green (s)     | 19.4  |      | 39.3  | 19.4  | 19.4  | 19.4  | 13.1  | 53.4  |     |     | 33.9  | 33.9  |
| Actuated g/C Ratio      | 0.23  |      | 0.46  | 0.23  | 0.23  | 0.23  | 0.15  | 0.62  |     |     | 0.40  | 0.40  |
| v/c Ratio               | 0.43  |      | 0.57  | 0.29  | 0.40  | 0.70  | 0.59  | 0.70  |     |     | 0.45  | 0.18  |
| Control Delay           | 34.1  |      | 18.0  | 28.3  | 30.3  | 28.1  | 39.7  | 14.9  |     |     | 22.4  | 5.7   |
| Queue Delay             | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Delay             | 34.1  |      | 18.0  | 28.3  | 30.3  | 28.1  | 39.7  | 14.9  |     |     | 22.4  | 5.7   |
| LOS                     | C     |      | B     | C     | C     | C     | D     | B     |     |     | C     | A     |
| Approach Delay          |       | 21.5 |       |       | 28.7  |       |       | 19.1  |     |     | 20.3  |       |
| Approach LOS            |       | C    |       |       | C     |       |       | B     |     |     | C     |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 85.8

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 21.2

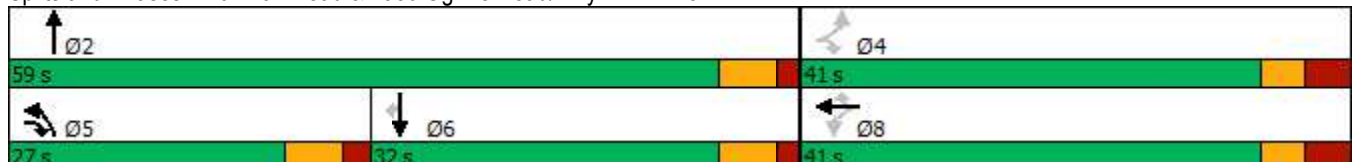
Intersection LOS: C

Intersection Capacity Utilization 73.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off



1900/2000 City Park Drive

9: City Park Drive/1941 Ogilvie & Ogilvie Road

Existing AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                    |   |  |  |  |  |
| Traffic Volume (vph)       | 102                                                                               | 550                                                                               | 76                                                                                | 87                                                                                | 862                                                                               | 174                                                                               | 53                                                                                 | 23                                                                                  | 58                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Future Volume (vph)        | 102                                                                               | 550                                                                               | 76                                                                                | 87                                                                                | 862                                                                               | 174                                                                               | 53                                                                                 | 23                                                                                  | 58                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                  |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.96                                                                              |                                                                                   | 0.87                                                                              | 0.96                                                                              |                                                                                   | 0.81                                                                              |                                                                                    | 0.96                                                                                | 0.93                                                                                | 0.95                                                                                |                                                                                     |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.966                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                  | 1628                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.265                                                                             |                                                                                   |                                                                                   | 0.411                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.792                                                                               |                                                                                     | 0.702                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 456                                                                               | 3390                                                                              | 1320                                                                              | 694                                                                               | 3357                                                                              | 1211                                                                              | 0                                                                                  | 1280                                                                                | 1334                                                                                | 1190                                                                                | 1784                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 84                                                                                |                                                                                   |                                                                                   | 193                                                                               |                                                                                    |                                                                                     | 64                                                                                  |                                                                                     |                                                                                     | 56                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                    | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                    | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 100                                                                               |                                                                                   | 65                                                                                | 65                                                                                |                                                                                   | 100                                                                               | 53                                                                                 |                                                                                     | 51                                                                                  | 51                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                               | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                 | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 113                                                                               | 611                                                                               | 84                                                                                | 97                                                                                | 958                                                                               | 193                                                                               | 59                                                                                 | 26                                                                                  | 64                                                                                  | 6                                                                                   | 2                                                                                   | 10                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 113                                                                               | 611                                                                               | 84                                                                                | 97                                                                                | 958                                                                               | 193                                                                               | 0                                                                                  | 85                                                                                  | 64                                                                                  | 6                                                                                   | 2                                                                                   | 10                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

1900/2000 City Park Drive  
9: City Park Drive/1941 Ogilvie & Ogilvie Road

Existing AM

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Confl. Bikes (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |

# 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie & Ogilvie Road

Existing AM

|                         |  |       |       |       |       |       |       |       |       |       |       |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Detector 2 Extend (s)   |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Turn Type               | Perm                                                                               | NA    | Perm  | Perm  | NA    | Perm  | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases        |                                                                                    | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases        | 2                                                                                  |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       | 4     |
| Detector Phase          | 2                                                                                  | 2     | 2     | 6     | 6     | 6     | 8     | 8     | 8     | 4     | 4     | 4     |
| Switch Phase            |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)     | 10.0                                                                               | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 35.1                                                                               | 35.1  | 35.1  | 35.1  | 35.1  | 35.1  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  |
| Total Split (s)         | 61.0                                                                               | 61.0  | 61.0  | 61.0  | 61.0  | 61.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)         | 61.0%                                                                              | 61.0% | 61.0% | 61.0% | 61.0% | 61.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% |
| Maximum Green (s)       | 54.9                                                                               | 54.9  | 54.9  | 54.9  | 54.9  | 54.9  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  |
| Yellow Time (s)         | 3.7                                                                                | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.4                                                                                | 2.4   | 2.4   | 2.4   | 2.4   | 2.4   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.1                                                                                | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |       | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |
| Lead/Lag                |                                                                                    |       |       |       |       |       | Lag   | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |                                                                                    |       |       |       |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max                                                                              | C-Max | C-Max | C-Max | C-Max | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           | 7.0                                                                                | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Flash Dont Walk (s)     | 22.0                                                                               | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) | 35                                                                                 | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    |
| Act Effect Green (s)    | 68.7                                                                               | 68.7  | 68.7  | 68.7  | 68.7  | 68.7  |       | 20.2  | 20.2  | 20.2  | 20.2  | 20.2  |
| Actuated g/C Ratio      | 0.69                                                                               | 0.69  | 0.69  | 0.69  | 0.69  | 0.69  |       | 0.20  | 0.20  | 0.20  | 0.20  | 0.20  |
| v/c Ratio               | 0.36                                                                               | 0.26  | 0.09  | 0.20  | 0.42  | 0.22  |       | 0.33  | 0.20  | 0.03  | 0.01  | 0.03  |
| Control Delay           | 7.8                                                                                | 2.7   | 0.3   | 11.6  | 11.0  | 2.3   |       | 35.0  | 8.9   | 27.2  | 27.0  | 0.1   |
| Queue Delay             | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 7.8                                                                                | 2.7   | 0.3   | 11.6  | 11.0  | 2.3   |       | 35.0  | 8.9   | 27.2  | 27.0  | 0.1   |
| LOS                     | A                                                                                  | A     | A     | B     | B     | A     |       | C     | A     | C     | C     | A     |
| Approach Delay          |                                                                                    | 3.2   |       |       | 9.7   |       |       | 23.8  |       |       | 12.1  |       |
| Approach LOS            |                                                                                    | A     |       |       | A     |       |       | C     |       |       | B     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 13 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 8.3

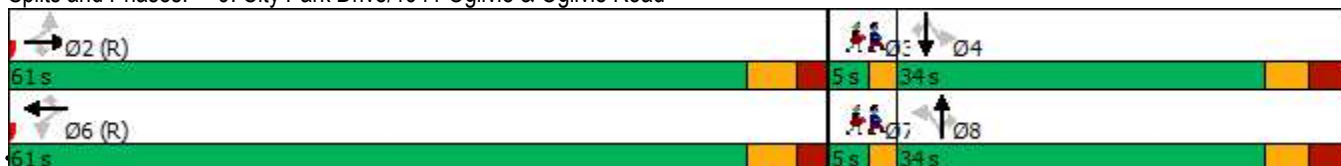
Intersection LOS: A

Intersection Capacity Utilization 69.5%

ICU Level of Service C

Analysis Period (min) 15

### Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



Synchro 11 Report

04/04/2023

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Detector 2 Extend (s)   |      |      |
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

Existing AM

|                            |  |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                 | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 99                                                                                 | 681   | 27    | 19    | 969   | 44    | 9     | 1     | 12    | 42    | 11    | 63    |
| Future Volume (vph)        | 99                                                                                 | 681   | 27    | 19    | 969   | 44    | 9     | 1     | 12    | 42    | 11    | 63    |
| Ideal Flow (vphpl)         | 1800                                                                               | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  |
| Storage Length (m)         | 60.0                                                                               |       | 80.0  | 90.0  |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   |
| Storage Lanes              | 1                                                                                  |       | 1     | 1     |       | 0     | 1     |       | 0     | 0     |       | 1     |
| Taper Length (m)           | 30.0                                                                               |       |       | 20.0  |       |       | 7.6   |       |       | 7.6   |       |       |
| Lane Util. Factor          | 1.00                                                                               | 0.95  | 1.00  | 1.00  | 0.95  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            | 0.99                                                                               |       | 0.95  | 0.99  | 1.00  |       | 0.96  | 0.95  |       |       | 0.96  | 0.94  |
| Frt                        |                                                                                    |       | 0.850 |       | 0.993 |       |       | 0.861 |       |       |       | 0.850 |
| Flt Protected              | 0.950                                                                              |       |       | 0.950 |       |       | 0.950 |       |       |       | 0.962 |       |
| Satd. Flow (prot)          | 1695                                                                               | 3390  | 1517  | 1679  | 3319  | 0     | 1695  | 1452  | 0     | 0     | 1717  | 1517  |
| Flt Permitted              | 0.215                                                                              |       |       | 0.346 |       |       | 0.719 |       |       |       | 0.767 |       |
| Satd. Flow (perm)          | 379                                                                                | 3390  | 1434  | 605   | 3319  | 0     | 1227  | 1452  | 0     | 0     | 1317  | 1429  |
| Right Turn on Red          |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |                                                                                    |       | 40    |       | 8     |       |       | 13    |       |       |       | 70    |
| Link Speed (k/h)           |                                                                                    | 60    |       |       | 60    |       |       | 60    |       |       | 60    |       |
| Link Distance (m)          |                                                                                    | 190.5 |       |       | 224.7 |       |       | 86.0  |       |       | 56.6  |       |
| Travel Time (s)            |                                                                                    | 11.4  |       |       | 13.5  |       |       | 5.2   |       |       | 3.4   |       |
| Confl. Peds. (#/hr)        | 41                                                                                 |       | 17    | 17    |       | 41    | 47    |       | 48    | 48    |       | 47    |
| Peak Hour Factor           | 0.90                                                                               | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%    | 2%    | 3%    | 3%    | 3%    | 2%    | 2%    | 2%    | 2%    | 2%    | 2%    |
| Adj. Flow (vph)            | 110                                                                                | 757   | 30    | 21    | 1077  | 49    | 10    | 1     | 13    | 47    | 12    | 70    |
| Shared Lane Traffic (%)    |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 110                                                                                | 757   | 30    | 21    | 1126  | 0     | 10    | 14    | 0     | 0     | 59    | 70    |
| Enter Blocked Intersection | No                                                                                 | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left                                                                               | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(m)            |                                                                                    | 3.7   |       |       | 3.7   |       |       | 3.7   |       |       | 3.7   |       |
| Link Offset(m)             |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Crosswalk Width(m)         |                                                                                    | 4.9   |       |       | 4.9   |       |       | 4.9   |       |       | 4.9   |       |
| Two way Left Turn Lane     |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.06                                                                               | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  |
| Turning Speed (k/h)        | 24                                                                                 |       | 14    | 24    |       | 14    | 24    |       | 14    | 24    |       | 14    |
| Number of Detectors        | 1                                                                                  | 2     | 1     | 1     | 2     |       | 1     | 2     |       | 1     | 2     | 1     |
| Detector Template          | Left                                                                               | Thru  | Right | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  | Right |
| Leading Detector (m)       | 6.1                                                                                | 30.5  | 6.1   | 6.1   | 30.5  |       | 6.1   | 30.5  |       | 6.1   | 30.5  | 6.1   |
| Trailing Detector (m)      | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Position(m)     | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Size(m)         | 6.1                                                                                | 1.8   | 6.1   | 6.1   | 1.8   |       | 6.1   | 1.8   |       | 6.1   | 1.8   | 6.1   |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(m)     |                                                                                    | 28.7  |       |       | 28.7  |       |       | 28.7  |       |       | 28.7  |       |
| Detector 2 Size(m)         |                                                                                    | 1.8   |       |       | 1.8   |       |       | 1.8   |       |       | 1.8   |       |
| Detector 2 Type            |                                                                                    | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |

# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

Existing AM

|                         | ↖     | →     | ↗     | ↖     | ←     | ↖   | ↖     | ↑     | ↗   | ↘     | ↓     | ↙     |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    |     | Perm  | NA    |     | Perm  | NA    | Perm  |
| Protected Phases        |       | 2     |       |       | 6     |     |       | 8     |     |       | 4     |       |
| Permitted Phases        | 2     |       | 2     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 6     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 29.9  | 29.9  | 29.9  | 29.9  | 29.9  |     | 36.7  | 36.7  |     | 36.7  | 36.7  | 36.7  |
| Total Split (s)         | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  |     | 37.0  | 37.0  |     | 37.0  | 37.0  | 37.0  |
| Total Split (%)         | 63.0% | 63.0% | 63.0% | 63.0% | 63.0% |     | 37.0% | 37.0% |     | 37.0% | 37.0% | 37.0% |
| Maximum Green (s)       | 57.1  | 57.1  | 57.1  | 57.1  | 57.1  |     | 30.3  | 30.3  |     | 30.3  | 30.3  | 30.3  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   |     | 3.3   | 3.3   |     | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   |     | 3.4   | 3.4   |     | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   |     | 6.7   | 6.7   |     |       | 6.7   | 6.7   |
| Lead/Lag                |       |       |       |       |       |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | C-Max | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |     | 23.0  | 23.0  |     | 23.0  | 23.0  | 23.0  |
| Pedestrian Calls (#/hr) | 10    | 10    | 10    | 10    | 10    |     | 30    | 30    |     | 30    | 30    | 30    |
| Act Effect Green (s)    | 69.9  | 69.9  | 69.9  | 69.9  | 69.9  |     | 22.0  | 22.0  |     |       | 22.0  | 22.0  |
| Actuated g/C Ratio      | 0.70  | 0.70  | 0.70  | 0.70  | 0.70  |     | 0.22  | 0.22  |     |       | 0.22  | 0.22  |
| v/c Ratio               | 0.42  | 0.32  | 0.03  | 0.05  | 0.48  |     | 0.04  | 0.04  |     |       | 0.20  | 0.19  |
| Control Delay           | 16.8  | 8.6   | 2.2   | 5.7   | 5.4   |     | 25.2  | 13.2  |     |       | 29.8  | 7.7   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 16.8  | 8.6   | 2.2   | 5.7   | 5.4   |     | 25.2  | 13.2  |     |       | 29.8  | 7.7   |
| LOS                     | B     | A     | A     | A     | A     |     | C     | B     |     |       | C     | A     |
| Approach Delay          |       | 9.4   |       |       | 5.4   |     |       | 18.2  |     |       | 17.8  |       |
| Approach LOS            |       | A     |       |       | A     |     |       | B     |     |       | B     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 12 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 7.9

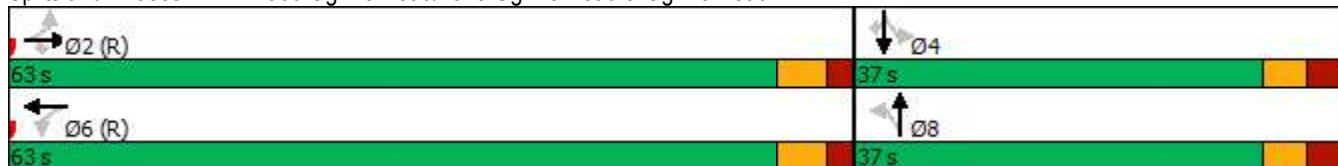
Intersection LOS: A

Intersection Capacity Utilization 89.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road



## 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive &amp; Ogilvie Road

Existing AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 156                                                                               | 475                                                                               | 83                                                                                | 14                                                                                | 820                                                                               | 161                                                                               | 72                                                                                  | 38                                                                                  | 13                                                                                  | 119                                                                                 | 27                                                                                  | 178                                                                                 |
| Future Volume (vph)        | 156                                                                               | 475                                                                               | 83                                                                                | 14                                                                                | 820                                                                               | 161                                                                               | 72                                                                                  | 38                                                                                  | 13                                                                                  | 119                                                                                 | 27                                                                                  | 178                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 40.0                                                                              | 45.0                                                                              |                                                                                   | 70.0                                                                              | 30.0                                                                                |                                                                                     | 0.0                                                                                 | 20.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                                |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.98                                                                              |                                                                                   | 0.92                                                                              | 0.98                                                                              |                                                                                   | 0.89                                                                              | 0.99                                                                                | 0.99                                                                                |                                                                                     | 0.98                                                                                | 0.98                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     | 0.962                                                                               |                                                                                     |                                                                                     | 0.870                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1631                                                                                | 1637                                                                                | 0                                                                                   | 1647                                                                                | 1474                                                                                | 0                                                                                   |
| Flt Permitted              | 0.201                                                                             |                                                                                   |                                                                                   | 0.456                                                                             |                                                                                   |                                                                                   | 0.599                                                                               |                                                                                     |                                                                                     | 0.603                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 349                                                                               | 3357                                                                              | 1389                                                                              | 787                                                                               | 3357                                                                              | 1340                                                                              | 1018                                                                                | 1637                                                                                | 0                                                                                   | 1023                                                                                | 1474                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 121                                                                               |                                                                                   |                                                                                   | 179                                                                               |                                                                                     | 14                                                                                  |                                                                                     |                                                                                     | 198                                                                                 |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 256.0                                                                             |                                                                                   |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                     | 345.6                                                                               |                                                                                     |                                                                                     | 177.6                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.4                                                                              |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                     | 20.7                                                                                |                                                                                     |                                                                                     | 10.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 43                                                                                |                                                                                   | 27                                                                                | 27                                                                                |                                                                                   | 43                                                                                | 14                                                                                  |                                                                                     | 23                                                                                  | 23                                                                                  |                                                                                     | 14                                                                                  |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 173                                                                               | 528                                                                               | 92                                                                                | 16                                                                                | 911                                                                               | 179                                                                               | 80                                                                                  | 42                                                                                  | 14                                                                                  | 132                                                                                 | 30                                                                                  | 198                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 173                                                                               | 528                                                                               | 92                                                                                | 16                                                                                | 911                                                                               | 179                                                                               | 80                                                                                  | 56                                                                                  | 0                                                                                   | 132                                                                                 | 228                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

Existing AM

|                         | ↖     | →     | ↘     | ↙     | ←     | ↖     | ↙     | ↑     | ↗   | ↘     | ↓     | ↙   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
| Turn Type               | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Perm  | NA    |     | Perm  | NA    |     |
| Protected Phases        | 5     | 2     |       | 1     | 6     |       |       | 8     |     |       | 4     |     |
| Permitted Phases        | 2     |       | 2     | 6     |       | 6     | 8     |       |     | 4     |       |     |
| Detector Phase          | 5     | 2     | 2     | 1     | 6     | 6     | 8     | 8     |     | 4     | 4     |     |
| Switch Phase            |       |       |       |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 10.0  | 10.0  |     | 10.0  | 10.0  |     |
| Minimum Split (s)       | 9.7   | 30.0  | 30.0  | 9.7   | 30.0  | 30.0  | 37.4  | 37.4  |     | 37.4  | 37.4  |     |
| Total Split (s)         | 15.0  | 42.0  | 42.0  | 15.0  | 42.0  | 42.0  | 38.0  | 38.0  |     | 38.0  | 38.0  |     |
| Total Split (%)         | 15.0% | 42.0% | 42.0% | 15.0% | 42.0% | 42.0% | 38.0% | 38.0% |     | 38.0% | 38.0% |     |
| Maximum Green (s)       | 10.3  | 36.0  | 36.0  | 10.3  | 36.0  | 36.0  | 30.6  | 30.6  |     | 30.6  | 30.6  |     |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| All-Red Time (s)        | 1.0   | 2.3   | 2.3   | 1.0   | 2.3   | 2.3   | 4.4   | 4.4   |     | 4.4   | 4.4   |     |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 4.7   | 6.0   | 6.0   | 4.7   | 6.0   | 6.0   | 7.4   | 7.4   |     | 7.4   | 7.4   |     |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   |     | Lag   | Lag   |     |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |     | Yes   | Yes   |     |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | C-Max | C-Max | None  | C-Max | C-Max | None  | None  |     | None  | None  |     |
| Walk Time (s)           |       | 9.0   | 9.0   |       | 9.0   | 9.0   | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Flash Dont Walk (s)     |       | 15.0  | 15.0  |       | 15.0  | 15.0  | 28.0  | 28.0  |     | 28.0  | 28.0  |     |
| Pedestrian Calls (#/hr) |       | 15    | 15    |       | 15    | 15    | 15    | 15    |     | 15    | 15    |     |
| Act Effect Green (s)    | 62.9  | 57.2  | 57.2  | 55.1  | 47.9  | 47.9  | 19.9  | 19.9  |     | 19.9  | 19.9  |     |
| Actuated g/C Ratio      | 0.63  | 0.57  | 0.57  | 0.55  | 0.48  | 0.48  | 0.20  | 0.20  |     | 0.20  | 0.20  |     |
| v/c Ratio               | 0.51  | 0.28  | 0.11  | 0.03  | 0.57  | 0.24  | 0.40  | 0.17  |     | 0.65  | 0.51  |     |
| Control Delay           | 26.2  | 22.6  | 10.5  | 6.3   | 12.0  | 1.3   | 37.7  | 24.1  |     | 49.9  | 10.3  |     |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             | 26.2  | 22.6  | 10.5  | 6.3   | 12.0  | 1.3   | 37.7  | 24.1  |     | 49.9  | 10.3  |     |
| LOS                     | C     | C     | B     | A     | B     | A     | D     | C     |     | D     | B     |     |
| Approach Delay          |       | 22.0  |       |       | 10.2  |       |       | 32.1  |     |       | 24.8  |     |
| Approach LOS            |       | C     |       |       | B     |       |       | C     |     |       | C     |     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 29 (29%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 17.5

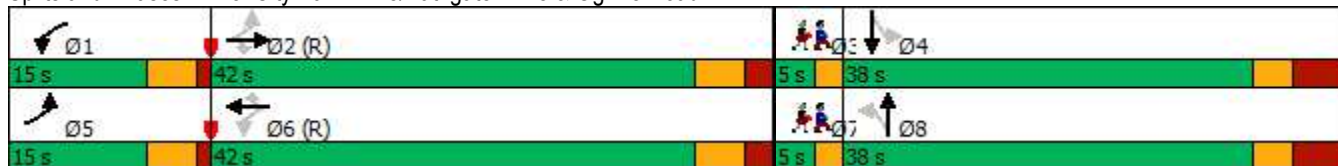
Intersection LOS: B

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 15: City Park Drive/Bathgate Drive & Ogilvie Road



1900/2000 City Park Drive  
 15: City Park Drive/Bathgate Drive & Ogilvie Road

Existing AM

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | Ped  | Ped  |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 15   | 15   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

1900/2000 City Park Drive  
18: Palmerston Drive/Matheson Road & Ogilvie Road

Existing AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 83                                                                                | 898                                                                               | 21                                                                                | 33                                                                                | 1056                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Future Volume (vph)        | 83                                                                                | 898                                                                               | 21                                                                                | 33                                                                                | 1056                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 70.0                                                                              |                                                                                   | 0.0                                                                               | 15.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 35.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.99                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.98                                                                                |                                                                                     |                                                                                     | 0.99                                                                                | 0.99                                                                                |
| Frt                        |                                                                                   | 0.997                                                                             |                                                                                   |                                                                                   | 0.998                                                                             |                                                                                   |                                                                                     | 0.860                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.955                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3374                                                                              | 0                                                                                 | 1695                                                                              | 3381                                                                              | 0                                                                                 | 1662                                                                                | 1469                                                                                | 0                                                                                   | 0                                                                                   | 1704                                                                                | 1517                                                                                |
| Flt Permitted              | 0.176                                                                             |                                                                                   |                                                                                   | 0.243                                                                             |                                                                                   |                                                                                   | 0.738                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.718                                                                               |                                                                                     |
| Satd. Flow (perm)          | 313                                                                               | 3374                                                                              | 0                                                                                 | 430                                                                               | 3381                                                                              | 0                                                                                 | 1287                                                                                | 1469                                                                                | 0                                                                                   | 0                                                                                   | 1267                                                                                | 1497                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 3                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                     | 29                                                                                  |                                                                                     |                                                                                     |                                                                                     | 190                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 314.1                                                                             |                                                                                   |                                                                                   | 266.1                                                                             |                                                                                   |                                                                                     | 176.2                                                                               |                                                                                     |                                                                                     |                                                                                     | 174.1                                                                               |
| Travel Time (s)            |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                   | 16.0                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     |                                                                                     | 10.4                                                                                |
| Confl. Peds. (#/hr)        | 11                                                                                |                                                                                   | 26                                                                                | 26                                                                                |                                                                                   | 11                                                                                | 4                                                                                   |                                                                                     | 14                                                                                  | 14                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 21                                                                                |                                                                                   |                                                                                   | 9                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                  | 4%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 92                                                                                | 998                                                                               | 23                                                                                | 37                                                                                | 1173                                                                              | 16                                                                                | 63                                                                                  | 2                                                                                   | 29                                                                                  | 28                                                                                  | 2                                                                                   | 190                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 92                                                                                | 1021                                                                              | 0                                                                                 | 37                                                                                | 1189                                                                              | 0                                                                                 | 63                                                                                  | 31                                                                                  | 0                                                                                   | 0                                                                                   | 30                                                                                  | 190                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 1900/2000 City Park Drive

## 18: Palmerston Drive/Matheson Road & Ogilvie Road

Existing AM

|                         | ↖     | →     | ↗   | ↖     | ←     | ↖   | ↖     | ↑     | ↗   | ↘     | ↓     | ↙     |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
| Detector 2 Extend (s)   |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |       |
| Turn Type               | pm+pt | NA    |     | pm+pt | NA    |     | Perm  | NA    |     | Perm  | NA    | Perm  |
| Protected Phases        | 5     | 2     |     | 1     | 6     |     |       | 8     |     |       | 4     |       |
| Permitted Phases        | 2     |       |     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 5     | 2     |     | 1     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 5.0   | 10.0  |     | 5.0   | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.7   | 33.6  |     | 9.7   | 33.6  |     | 40.2  | 40.2  |     | 40.2  | 40.2  | 40.2  |
| Total Split (s)         | 13.0  | 47.0  |     | 13.0  | 47.0  |     | 40.0  | 40.0  |     | 40.0  | 40.0  | 40.0  |
| Total Split (%)         | 13.0% | 47.0% |     | 13.0% | 47.0% |     | 40.0% | 40.0% |     | 40.0% | 40.0% | 40.0% |
| Maximum Green (s)       | 8.3   | 41.4  |     | 8.3   | 41.4  |     | 32.8  | 32.8  |     | 32.8  | 32.8  | 32.8  |
| Yellow Time (s)         | 3.7   | 3.7   |     | 3.7   | 3.7   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 1.0   | 1.9   |     | 1.0   | 1.9   |     | 4.2   | 4.2   |     | 4.2   | 4.2   | 4.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 4.7   | 5.6   |     | 4.7   | 5.6   |     | 7.2   | 7.2   |     |       | 7.2   | 7.2   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   |     | Yes   | Yes   |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  | C-Max |     | None  | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           |       | 15.0  |     |       | 15.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 13.0  |     |       | 13.0  |     | 26.0  | 26.0  |     | 26.0  | 26.0  | 26.0  |
| Pedestrian Calls (#/hr) |       | 10    |     |       | 10    |     | 10    | 10    |     | 10    | 10    | 10    |
| Act Effct Green (s)     | 70.7  | 65.3  |     | 68.7  | 62.7  |     | 15.0  | 15.0  |     |       | 15.0  | 15.0  |
| Actuated g/C Ratio      | 0.71  | 0.65  |     | 0.69  | 0.63  |     | 0.15  | 0.15  |     |       | 0.15  | 0.15  |
| v/c Ratio               | 0.29  | 0.46  |     | 0.10  | 0.56  |     | 0.33  | 0.13  |     |       | 0.16  | 0.49  |
| Control Delay           | 8.2   | 12.3  |     | 3.7   | 6.1   |     | 39.6  | 12.5  |     |       | 34.9  | 9.0   |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 8.2   | 12.3  |     | 3.7   | 6.1   |     | 39.6  | 12.5  |     |       | 34.9  | 9.0   |
| LOS                     | A     | B     |     | A     | A     |     | D     | B     |     |       | C     | A     |
| Approach Delay          |       | 11.9  |     |       | 6.1   |     |       | 30.7  |     |       | 12.5  |       |
| Approach LOS            |       | B     |     |       | A     |     |       | C     |     |       | B     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 54 (54%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 9.9

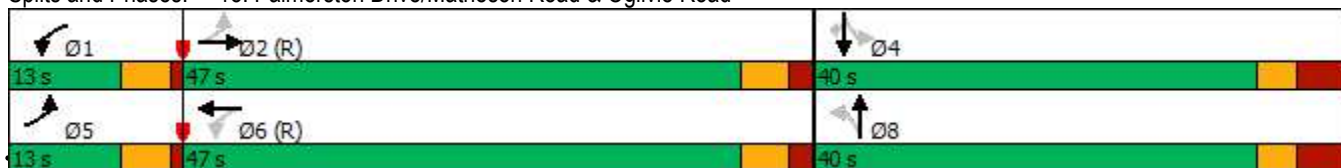
Intersection LOS: A

Intersection Capacity Utilization 74.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 18: Palmerston Drive/Matheson Road & Ogilvie Road



Synchro 11 Report

04/04/2023

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

Existing AM

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |  |                                                                                   |  |
| Traffic Volume (vph)       | 174                                                                               | 878                                                                               | 802                                                                               | 71                                                                                | 157                                                                               | 396                                                                               |
| Future Volume (vph)        | 174                                                                               | 878                                                                               | 802                                                                               | 71                                                                                | 157                                                                               | 396                                                                               |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Storage Length (m)         | 0.0                                                                               | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   |
| Storage Lanes              | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.986                                                                             |
| Satd. Flow (prot)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 3217                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.581                                                                             |
| Satd. Flow (perm)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 1895                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 483                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (k/h)           | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)          | 216.4                                                                             |                                                                                   | 230.9                                                                             |                                                                                   |                                                                                   | 341.9                                                                             |
| Travel Time (s)            | 13.0                                                                              |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 20.5                                                                              |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              |
| Heavy Vehicles (%)         | 5%                                                                                | 5%                                                                                | 4%                                                                                | 4%                                                                                | 6%                                                                                | 6%                                                                                |
| Adj. Flow (vph)            | 193                                                                               | 976                                                                               | 891                                                                               | 79                                                                                | 174                                                                               | 440                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 193                                                                               | 976                                                                               | 891                                                                               | 79                                                                                | 0                                                                                 | 614                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)            | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)             | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)         | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)        | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |
| Leading Detector (m)       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Size(m)         | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 2 Position(m)     |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |
| Detector 2 Size(m)         |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |
| Detector 2 Type            |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Turn Type                  | Prot                                                                              | Free                                                                              | NA                                                                                | pm+ov                                                                             | Perm                                                                              | NA                                                                                |
| Protected Phases           | 8                                                                                 |                                                                                   | 2                                                                                 | 8                                                                                 |                                                                                   | 6                                                                                 |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

Existing AM

| Lane Group              | WBL   | WBR  | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|------|-------|-------|-------|-------|
| Permitted Phases        | Free  |      |       | 2     | 6     |       |
| Detector Phase          | 8     |      | 2     | 8     | 6     | 6     |
| Switch Phase            |       |      |       |       |       |       |
| Minimum Initial (s)     | 5.0   |      | 10.0  | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 25.3  |      | 30.5  | 25.3  | 16.5  | 16.5  |
| Total Split (s)         | 35.0  |      | 55.0  | 35.0  | 55.0  | 55.0  |
| Total Split (%)         | 38.9% |      | 61.1% | 38.9% | 61.1% | 61.1% |
| Maximum Green (s)       | 28.7  |      | 48.5  | 28.7  | 48.5  | 48.5  |
| Yellow Time (s)         | 3.3   |      | 4.2   | 3.3   | 4.2   | 4.2   |
| All-Red Time (s)        | 3.0   |      | 2.3   | 3.0   | 2.3   | 2.3   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   |       | 0.0   |
| Total Lost Time (s)     | 6.3   |      | 6.5   | 6.3   |       | 6.5   |
| Lead/Lag                |       |      |       |       |       |       |
| Lead-Lag Optimize?      |       |      |       |       |       |       |
| Vehicle Extension (s)   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  |      | Max   | None  | Max   | Max   |
| Walk Time (s)           | 7.0   |      | 7.0   | 7.0   |       |       |
| Flash Dont Walk (s)     | 12.0  |      | 17.0  | 12.0  |       |       |
| Pedestrian Calls (#/hr) | 0     |      | 0     | 0     |       |       |
| Act Effct Green (s)     | 14.0  | 75.4 | 48.6  | 75.4  |       | 48.6  |
| Actuated g/C Ratio      | 0.19  | 1.00 | 0.64  | 1.00  |       | 0.64  |
| v/c Ratio               | 0.63  | 0.66 | 0.42  | 0.05  |       | 0.50  |
| Control Delay           | 38.0  | 2.4  | 7.8   | 0.1   |       | 9.5   |
| Queue Delay             | 0.0   | 0.0  | 0.0   | 0.0   |       | 0.0   |
| Total Delay             | 38.0  | 2.4  | 7.8   | 0.1   |       | 9.5   |
| LOS                     | D     | A    | A     | A     |       | A     |
| Approach Delay          | 8.3   |      | 7.1   |       |       | 9.5   |
| Approach LOS            | A     |      | A     |       |       | A     |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 75.4

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 8.1

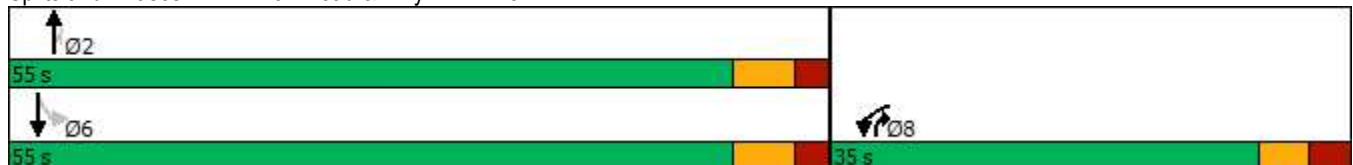
Intersection LOS: A

Intersection Capacity Utilization 66.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 22: Blair Road & Hwy 174 EB off



1900/2000 City Park Drive  
26: Residential/Cadboro Road & Ogilvie Road

Existing AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |                                                                                     |  |                                                                                     |                                                                                     |  |
| Traffic Volume (vph)       | 0                                                                                 | 1013                                                                              | 9                                                                                 | 0                                                                                 | 1062                                                                              | 57                                                                                | 0                                                                                  | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Future Volume (vph)        | 0                                                                                 | 1013                                                                              | 9                                                                                 | 0                                                                                 | 1062                                                                              | 57                                                                                | 0                                                                                  | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Fr't                       |                                                                                   | 0.999                                                                             |                                                                                   |                                                                                   | 0.992                                                                             |                                                                                   |                                                                                    |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     | 0.865                                                                               |
| Flt Protected              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3363                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3363                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    |                                                                                     | 67                                                                                  |                                                                                     |                                                                                     | 59                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 266.1                                                                             |                                                                                   |                                                                                   | 256.0                                                                             |                                                                                   |                                                                                    | 114.0                                                                               |                                                                                     |                                                                                     | 107.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 16.0                                                                              |                                                                                   |                                                                                   | 15.4                                                                              |                                                                                   |                                                                                    | 6.8                                                                                 |                                                                                     |                                                                                     | 6.4                                                                                 |                                                                                     |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                               | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Adj. Flow (vph)            | 0                                                                                 | 1126                                                                              | 10                                                                                | 0                                                                                 | 1180                                                                              | 63                                                                                | 0                                                                                  | 0                                                                                   | 7                                                                                   | 0                                                                                   | 0                                                                                   | 23                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 1136                                                                              | 0                                                                                 | 0                                                                                 | 1243                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 7                                                                                   | 0                                                                                   | 0                                                                                   | 23                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                    | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 97                                                                                |                                                                                   | 97                                                                                | 97                                                                                |                                                                                   | 97                                                                                | 97                                                                                 |                                                                                     | 97                                                                                  | 97                                                                                  |                                                                                     | 97                                                                                  |
| Number of Detectors        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                    |                                                                                     | 1                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Detector Template          |                                                                                   | Thru                                                                              |                                                                                   |                                                                                   | Thru                                                                              |                                                                                   |                                                                                    |                                                                                     | Right                                                                               |                                                                                     |                                                                                     | Right                                                                               |
| Leading Detector (m)       |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Trailing Detector (m)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Position(m)     |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                    |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Detector 1 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Queue (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Delay (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type                  |                                                                                   | NA                                                                                |                                                                                   |                                                                                   | NA                                                                                |                                                                                   |                                                                                    |                                                                                     | Perm                                                                                |                                                                                     |                                                                                     | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Permitted Phases           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Detector Phase             |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |

1900/2000 City Park Drive  
26: Residential/Cadboro Road & Ogilvie Road

Existing AM

|                         |  |       |     |     |       |     |     |     |       |     |     |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-----|-------|-----|-----|-----|-------|-----|-----|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL | WBT   | WBR | NBL | NBT | NBR   | SBL | SBT | SBR   |
| Minimum Split (s)       |                                                                                    | 35.0  |     |     | 35.0  |     |     |     | 40.0  |     |     | 40.0  |
| Total Split (s)         |                                                                                    | 60.0  |     |     | 60.0  |     |     |     | 40.0  |     |     | 40.0  |
| Total Split (%)         |                                                                                    | 60.0% |     |     | 60.0% |     |     |     | 40.0% |     |     | 40.0% |
| Maximum Green (s)       |                                                                                    | 54.0  |     |     | 54.0  |     |     |     | 36.0  |     |     | 36.0  |
| Yellow Time (s)         |                                                                                    | 3.7   |     |     | 3.7   |     |     |     | 3.0   |     |     | 3.0   |
| All-Red Time (s)        |                                                                                    | 2.3   |     |     | 2.3   |     |     |     | 1.0   |     |     | 1.0   |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |     | 0.0   |
| Total Lost Time (s)     |                                                                                    | 6.0   |     |     | 6.0   |     |     |     | 4.0   |     |     | 4.0   |
| Lead/Lag                |                                                                                    |       |     |     |       |     |     |     |       |     |     |       |
| Lead-Lag Optimize?      |                                                                                    |       |     |     |       |     |     |     |       |     |     |       |
| Vehicle Extension (s)   |                                                                                    | 3.0   |     |     | 3.0   |     |     |     | 3.0   |     |     | 3.0   |
| Recall Mode             |                                                                                    | C-Max |     |     | C-Max |     |     |     | None  |     |     | None  |
| Walk Time (s)           |                                                                                    | 15.0  |     |     | 15.0  |     |     |     | 24.0  |     |     | 24.0  |
| Flash Dont Walk (s)     |                                                                                    | 14.0  |     |     | 14.0  |     |     |     | 12.0  |     |     | 12.0  |
| Pedestrian Calls (#/hr) |                                                                                    | 20    |     |     | 20    |     |     |     | 15    |     |     | 15    |
| Act Effct Green (s)     |                                                                                    | 78.5  |     |     | 78.5  |     |     |     | 17.7  |     |     | 17.7  |
| Actuated g/C Ratio      |                                                                                    | 0.78  |     |     | 0.78  |     |     |     | 0.18  |     |     | 0.18  |
| v/c Ratio               |                                                                                    | 0.43  |     |     | 0.47  |     |     |     | 0.02  |     |     | 0.07  |
| Control Delay           |                                                                                    | 6.3   |     |     | 4.2   |     |     |     | 0.2   |     |     | 0.6   |
| Queue Delay             |                                                                                    | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |     | 0.0   |
| Total Delay             |                                                                                    | 6.3   |     |     | 4.2   |     |     |     | 0.2   |     |     | 0.6   |
| LOS                     |                                                                                    | A     |     |     | A     |     |     |     | A     |     |     | A     |
| Approach Delay          |                                                                                    | 6.3   |     |     | 4.2   |     |     | 0.2 |       |     | 0.6 |       |
| Approach LOS            |                                                                                    | A     |     |     | A     |     |     | A   |       |     | A   |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 42 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 5.2

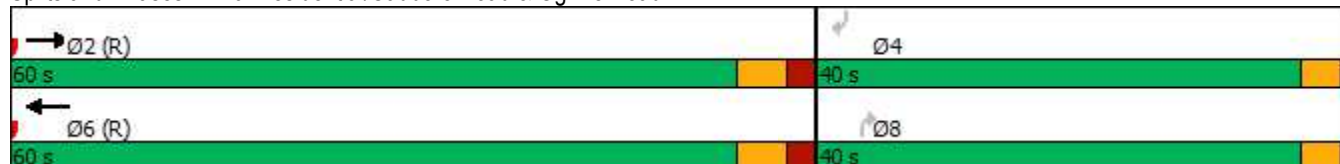
Intersection LOS: A

Intersection Capacity Utilization 45.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 26: Residential/Cadboro Road & Ogilvie Road



1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

Existing PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 132                                                                               | 680                                                                               | 550                                                                               | 464                                                                               | 363                                                                               | 53                                                                                | 191                                                                                 | 258                                                                                 | 502                                                                                 | 43                                                                                  | 666                                                                                 | 48                                                                                  |
| Future Volume (vph)        | 132                                                                               | 680                                                                               | 550                                                                               | 464                                                                               | 363                                                                               | 53                                                                                | 191                                                                                 | 258                                                                                 | 502                                                                                 | 43                                                                                  | 666                                                                                 | 48                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 110.0                                                                             |                                                                                   | 0.0                                                                               | 120.0                                                                               |                                                                                     | 0.0                                                                                 | 30.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 0                                                                                 | 2                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 40.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.97                                                                              | 0.95                                                                              | 0.95                                                                              | 0.97                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.99                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     | 0.990                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3259                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3295                                                                                | 0                                                                                   |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3259                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3295                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 236                                                                               |                                                                                   | 12                                                                                |                                                                                   |                                                                                     |                                                                                     | 481                                                                                 |                                                                                     | 5                                                                                   |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                   | 396.5                                                                             |                                                                                   |                                                                                     | 239.9                                                                               |                                                                                     |                                                                                     | 411.0                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                   | 23.8                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 29                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 84                                                                                  |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 147                                                                               | 756                                                                               | 611                                                                               | 516                                                                               | 403                                                                               | 59                                                                                | 212                                                                                 | 287                                                                                 | 558                                                                                 | 48                                                                                  | 740                                                                                 | 53                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 147                                                                               | 756                                                                               | 611                                                                               | 516                                                                               | 462                                                                               | 0                                                                                 | 212                                                                                 | 287                                                                                 | 558                                                                                 | 48                                                                                  | 793                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

Existing PM

|                         |  |       |       |       |       |     |       |       |       |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    |     | Prot  | NA    | Perm  | Prot  | NA    |     |
| Protected Phases        | 5                                                                                  | 2     |       | 1     | 6     |     | 3     | 8     |       | 7     | 4     |     |
| Permitted Phases        |                                                                                    |       | 2     |       |       |     |       |       | 8     |       |       |     |
| Detector Phase          | 5                                                                                  | 2     | 2     | 1     | 6     |     | 3     | 8     | 8     | 7     | 4     |     |
| Switch Phase            |                                                                                    |       |       |       |       |     |       |       |       |       |       |     |
| Minimum Initial (s)     | 5.0                                                                                | 10.0  | 10.0  | 5.0   | 10.0  |     | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  |     |
| Minimum Split (s)       | 11.8                                                                               | 38.6  | 38.6  | 11.8  | 38.6  |     | 11.5  | 35.5  | 35.5  | 11.5  | 35.5  |     |
| Total Split (s)         | 25.0                                                                               | 41.0  | 41.0  | 37.0  | 53.0  |     | 21.0  | 41.0  | 41.0  | 21.0  | 41.0  |     |
| Total Split (%)         | 17.9%                                                                              | 29.3% | 29.3% | 26.4% | 37.9% |     | 15.0% | 29.3% | 29.3% | 15.0% | 29.3% |     |
| Maximum Green (s)       | 18.2                                                                               | 34.4  | 34.4  | 30.2  | 46.4  |     | 14.5  | 34.5  | 34.5  | 14.5  | 34.5  |     |
| Yellow Time (s)         | 3.7                                                                                | 3.3   | 3.3   | 3.7   | 3.3   |     | 4.2   | 4.2   | 4.2   | 4.2   | 4.2   |     |
| All-Red Time (s)        | 3.1                                                                                | 3.3   | 3.3   | 3.1   | 3.3   |     | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   |     |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 6.8                                                                                | 6.6   | 6.6   | 6.8   | 6.6   |     | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |     |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   |     | Lead  | Lag   | Lag   | Lead  | Lag   |     |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   |     | Yes   | Yes   | Yes   | Yes   | Yes   |     |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |
| Recall Mode             | None                                                                               | C-Max | C-Max | None  | C-Max |     | None  | None  | None  | None  | None  |     |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   |     |       | 7.0   | 7.0   |       | 7.0   |     |
| Flash Dont Walk (s)     |                                                                                    | 25.0  | 25.0  |       | 25.0  |     |       | 22.0  | 22.0  |       | 22.0  |     |
| Pedestrian Calls (#/hr) |                                                                                    | 30    | 30    |       | 30    |     |       | 35    | 35    |       | 35    |     |
| Act Effect Green (s)    | 16.0                                                                               | 38.6  | 38.6  | 26.6  | 49.2  |     | 13.3  | 41.5  | 41.5  | 9.4   | 35.1  |     |
| Actuated g/C Ratio      | 0.11                                                                               | 0.28  | 0.28  | 0.19  | 0.35  |     | 0.10  | 0.30  | 0.30  | 0.07  | 0.25  |     |
| v/c Ratio               | 0.77                                                                               | 0.82  | 1.04  | 0.83  | 0.40  |     | 0.69  | 0.55  | 0.71  | 0.43  | 0.96  |     |
| Control Delay           | 84.7                                                                               | 56.3  | 79.7  | 66.9  | 35.3  |     | 73.0  | 47.6  | 13.0  | 73.6  | 73.6  |     |
| Queue Delay             | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay             | 84.7                                                                               | 56.3  | 79.7  | 66.9  | 35.3  |     | 73.0  | 47.6  | 13.0  | 73.6  | 73.6  |     |
| LOS                     | F                                                                                  | E     | E     | E     | D     |     | E     | D     | B     | E     | E     |     |
| Approach Delay          |                                                                                    | 68.5  |       |       | 51.9  |     |       | 34.4  |       |       | 73.6  |     |
| Approach LOS            |                                                                                    | E     |       |       | D     |     |       | C     |       |       | E     |     |

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 57.6

Intersection LOS: E

Intersection Capacity Utilization 90.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Blair Road & Ogilvie Road



1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

Existing PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |                                                                                   |  |  |  |  |  |  |  |                                                                                     |  |  |
| Traffic Volume (vph)       | 118                                                                               | 0                                                                                 | 512                                                                               | 82                                                                                | 135                                                                               | 155                                                                               | 280                                                                                 | 1146                                                                                | 0                                                                                   | 0                                                                                   | 1581                                                                                | 165                                                                                 |
| Future Volume (vph)        | 118                                                                               | 0                                                                                 | 512                                                                               | 82                                                                                | 135                                                                               | 155                                                                               | 280                                                                                 | 1146                                                                                | 0                                                                                   | 0                                                                                   | 1581                                                                                | 165                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   | 70.0                                                                              | 60.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 50.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                   | 100.0                                                                               |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.97                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.91                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1544                                                                              | 0                                                                                 | 1381                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4871                                                                                | 1517                                                                                |
| Flt Permitted              | 0.582                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 946                                                                               | 0                                                                                 | 1381                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4871                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 26                                                                                |                                                                                   |                                                                                   | 89                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 106                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 518.9                                                                             |                                                                                   |                                                                                   | 416.4                                                                             |                                                                                   |                                                                                     | 90.2                                                                                |                                                                                     |                                                                                     | 239.9                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 31.1                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 14.4                                                                                |                                                                                     |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 12%                                                                               | 12%                                                                               | 12%                                                                               | 2%                                                                                | 2%                                                                                | 2%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 131                                                                               | 0                                                                                 | 569                                                                               | 91                                                                                | 150                                                                               | 172                                                                               | 311                                                                                 | 1273                                                                                | 0                                                                                   | 0                                                                                   | 1757                                                                                | 183                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 131                                                                               | 0                                                                                 | 569                                                                               | 91                                                                                | 150                                                                               | 172                                                                               | 311                                                                                 | 1273                                                                                | 0                                                                                   | 0                                                                                   | 1757                                                                                | 183                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              |                                                                                   | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     |                                                                                     | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     |                                                                                     | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              |                                                                                   | pm+ov                                                                             | Perm                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                                | NA                                                                                  |                                                                                     |                                                                                     | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   | 8                                                                                 |                                                                                   | 5                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |

# 1900/2000 City Park Drive

## 6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

Existing PM

|                         | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL | SBT   | SBR   |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Lane Group              | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL | SBT   | SBR   |
| Permitted Phases        | 4     |      | 4     | 8     |       | 8     |       |       |     |     |       | 6     |
| Detector Phase          | 4     |      | 5     | 8     | 8     | 8     | 5     | 2     |     |     | 6     | 6     |
| Switch Phase            |       |      |       |       |       |       |       |       |     |     |       |       |
| Minimum Initial (s)     | 10.0  |      | 5.0   | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  |     |     | 10.0  | 10.0  |
| Minimum Split (s)       | 16.8  |      | 11.4  | 36.8  | 36.8  | 36.8  | 11.4  | 30.1  |     |     | 30.1  | 30.1  |
| Total Split (s)         | 36.0  |      | 31.0  | 36.0  | 36.0  | 36.0  | 31.0  | 94.0  |     |     | 63.0  | 63.0  |
| Total Split (%)         | 27.7% |      | 23.8% | 27.7% | 27.7% | 27.7% | 23.8% | 72.3% |     |     | 48.5% | 48.5% |
| Maximum Green (s)       | 29.2  |      | 24.6  | 29.2  | 29.2  | 29.2  | 24.6  | 87.9  |     |     | 56.9  | 56.9  |
| Yellow Time (s)         | 3.3   |      | 4.2   | 3.3   | 3.3   | 3.3   | 4.2   | 4.2   |     |     | 4.2   | 4.2   |
| All-Red Time (s)        | 3.5   |      | 2.2   | 3.5   | 3.5   | 3.5   | 2.2   | 1.9   |     |     | 1.9   | 1.9   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.8   |      | 6.4   | 6.8   | 6.8   | 6.8   | 6.4   | 6.1   |     |     | 6.1   | 6.1   |
| Lead/Lag                |       |      | Lead  |       |       |       | Lead  |       |     |     | Lag   | Lag   |
| Lead-Lag Optimize?      |       |      | Yes   |       |       |       | Yes   |       |     |     | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |     | 3.0   | 3.0   |
| Recall Mode             | None  |      | None  | None  | None  | None  | None  | C-Max |     |     | C-Max | C-Max |
| Walk Time (s)           |       |      |       | 7.0   | 7.0   | 7.0   |       | 7.0   |     |     | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |      |       | 23.0  | 23.0  | 23.0  |       | 17.0  |     |     | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |       |      |       | 20    | 20    | 20    |       | 30    |     |     | 30    | 30    |
| Act Effct Green (s)     | 23.7  |      | 58.8  | 23.7  | 23.7  | 23.7  | 28.3  | 93.4  |     |     | 58.7  | 58.7  |
| Actuated g/C Ratio      | 0.18  |      | 0.45  | 0.18  | 0.18  | 0.18  | 0.22  | 0.72  |     |     | 0.45  | 0.45  |
| v/c Ratio               | 0.76  |      | 0.89  | 0.30  | 0.46  | 0.49  | 0.45  | 0.54  |     |     | 0.80  | 0.25  |
| Control Delay           | 76.3  |      | 48.8  | 46.5  | 50.7  | 26.4  | 47.6  | 10.4  |     |     | 34.4  | 10.6  |
| Queue Delay             | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Delay             | 76.3  |      | 48.8  | 46.5  | 50.7  | 26.4  | 47.6  | 10.4  |     |     | 34.4  | 10.6  |
| LOS                     | E     |      | D     | D     | D     | C     | D     | B     |     |     | C     | B     |
| Approach Delay          |       | 53.9 |       |       | 39.6  |       |       | 17.7  |     |     | 32.2  |       |
| Approach LOS            |       | D    |       |       | D     |       |       | B     |     |     | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 50 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 31.2

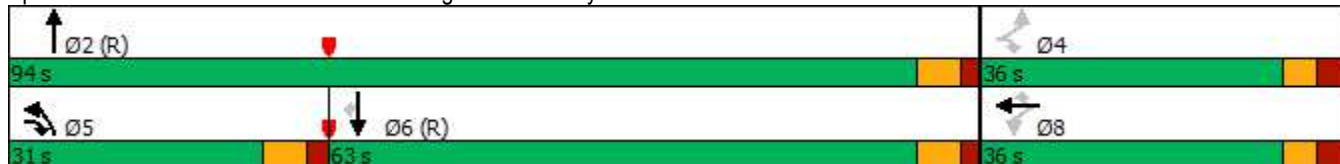
Intersection LOS: C

Intersection Capacity Utilization 90.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off



1900/2000 City Park Drive

9: City Park Drive/1941 Ogilvie & Ogilvie Road

Existing PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                     |  |  |  |  |  |
| Traffic Volume (vph)       | 32                                                                                | 1237                                                                              | 145                                                                               | 101                                                                               | 462                                                                               | 38                                                                                | 178                                                                                 | 10                                                                                  | 160                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Future Volume (vph)        | 32                                                                                | 1237                                                                              | 145                                                                               | 101                                                                               | 462                                                                               | 38                                                                                | 178                                                                                 | 10                                                                                  | 160                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                 |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.88                                                                              |                                                                                   | 0.87                                                                              |                                                                                   |                                                                                   | 0.73                                                                              |                                                                                     | 0.93                                                                                | 0.87                                                                                | 0.91                                                                                |                                                                                     | 0.92                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.955                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                   | 1609                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.463                                                                             |                                                                                   |                                                                                   | 0.077                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.722                                                                               |                                                                                     | 0.530                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 725                                                                               | 3390                                                                              | 1315                                                                              | 136                                                                               | 3357                                                                              | 1104                                                                              | 0                                                                                   | 1133                                                                                | 1244                                                                                | 864                                                                                 | 1784                                                                                | 1388                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 161                                                                               |                                                                                   |                                                                                   | 60                                                                                |                                                                                     |                                                                                     | 178                                                                                 |                                                                                     |                                                                                     | 99                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                     | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 145                                                                               |                                                                                   | 67                                                                                | 67                                                                                |                                                                                   | 145                                                                               | 67                                                                                  |                                                                                     | 110                                                                                 | 110                                                                                 |                                                                                     | 67                                                                                  |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                  | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 36                                                                                | 1374                                                                              | 161                                                                               | 112                                                                               | 513                                                                               | 42                                                                                | 198                                                                                 | 11                                                                                  | 178                                                                                 | 87                                                                                  | 21                                                                                  | 84                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 36                                                                                | 1374                                                                              | 161                                                                               | 112                                                                               | 513                                                                               | 42                                                                                | 0                                                                                   | 209                                                                                 | 178                                                                                 | 87                                                                                  | 21                                                                                  | 84                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie & Ogilvie Road

Existing PM

|                         | ↖     | →     | ↘     | ↙     | ←     | ↖     | ↙     | ↑     | ↗     | ↘     | ↓     | ↙     |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Turn Type               | Perm  | NA    | Perm  | pm+pt | NA    | Perm  | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases        |       | 2     |       | 1     | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases        | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 1     | 6     | 6     | 8     | 8     | 8     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 35.1  | 35.1  | 35.1  | 9.0   | 35.1  | 35.1  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  |
| Total Split (s)         | 46.0  | 46.0  | 46.0  | 15.0  | 61.0  | 61.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)         | 46.0% | 46.0% | 46.0% | 15.0% | 61.0% | 61.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% |
| Maximum Green (s)       | 39.9  | 39.9  | 39.9  | 11.0  | 54.9  | 54.9  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.0   | 3.7   | 3.7   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.4   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.1   | 6.1   | 6.1   | 4.0   | 6.1   | 6.1   |       | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lead  |       |       | Lag   | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Flash Dont Walk (s)     | 22.0  | 22.0  | 22.0  |       | 22.0  | 22.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) | 35    | 35    | 35    |       | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    |
| Act Effect Green (s)    | 48.8  | 48.8  | 48.8  | 63.3  | 61.2  | 61.2  |       | 23.2  | 23.2  | 23.2  | 23.2  | 23.2  |
| Actuated g/C Ratio      | 0.49  | 0.49  | 0.49  | 0.63  | 0.61  | 0.61  |       | 0.23  | 0.23  | 0.23  | 0.23  | 0.23  |
| v/c Ratio               | 0.10  | 0.83  | 0.22  | 0.52  | 0.25  | 0.06  |       | 0.80  | 0.42  | 0.43  | 0.05  | 0.21  |
| Control Delay           | 9.7   | 21.3  | 1.1   | 21.7  | 10.4  | 1.8   |       | 57.5  | 7.7   | 38.4  | 27.5  | 5.7   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 9.7   | 21.3  | 1.1   | 21.7  | 10.4  | 1.8   |       | 57.5  | 7.7   | 38.4  | 27.5  | 5.7   |
| LOS                     | A     | C     | A     | C     | B     | A     |       | E     | A     | D     | C     | A     |
| Approach Delay          |       | 19.0  |       |       | 11.8  |       |       | 34.6  |       |       | 22.9  |       |
| Approach LOS            |       | B     |       |       | B     |       |       | C     |       |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 30 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 19.7

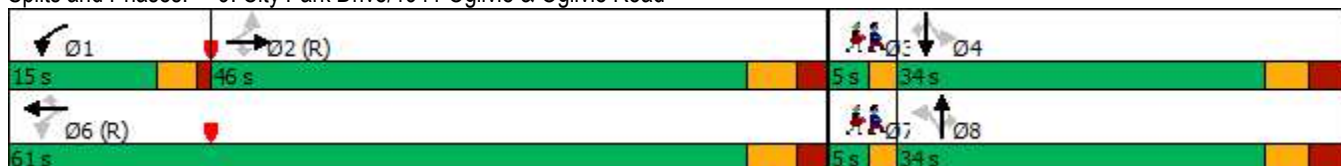
Intersection LOS: B

Intersection Capacity Utilization 95.3%

ICU Level of Service F

Analysis Period (min) 15

### Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

Existing PM

|                            |  |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                 | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 43                                                                                 | 1182  | 66    | 32    | 684   | 24    | 47    | 3     | 28    | 135   | 3     | 132   |
| Future Volume (vph)        | 43                                                                                 | 1182  | 66    | 32    | 684   | 24    | 47    | 3     | 28    | 135   | 3     | 132   |
| Ideal Flow (vphpl)         | 1800                                                                               | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  |
| Storage Length (m)         | 60.0                                                                               |       | 80.0  | 90.0  |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   |
| Storage Lanes              | 1                                                                                  |       | 1     | 1     |       | 0     | 1     |       | 0     | 0     |       | 1     |
| Taper Length (m)           | 30.0                                                                               |       |       | 20.0  |       |       | 7.6   |       |       | 7.6   |       |       |
| Lane Util. Factor          | 1.00                                                                               | 0.95  | 1.00  | 1.00  | 0.95  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                        |                                                                                    |       | 0.850 |       | 0.995 |       |       | 0.863 |       |       |       | 0.850 |
| Flt Protected              | 0.950                                                                              |       |       | 0.950 |       |       | 0.950 |       |       |       | 0.953 |       |
| Satd. Flow (prot)          | 1695                                                                               | 3390  | 1517  | 1679  | 3342  | 0     | 1695  | 1540  | 0     | 0     | 1700  | 1517  |
| Flt Permitted              | 0.328                                                                              |       |       | 0.157 |       |       | 0.646 |       |       |       | 0.705 |       |
| Satd. Flow (perm)          | 585                                                                                | 3390  | 1517  | 277   | 3342  | 0     | 1153  | 1540  | 0     | 0     | 1258  | 1517  |
| Right Turn on Red          |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |                                                                                    |       | 73    |       | 6     |       |       | 31    |       |       |       | 147   |
| Link Speed (k/h)           |                                                                                    | 60    |       |       | 60    |       |       | 60    |       |       |       | 60    |
| Link Distance (m)          |                                                                                    | 190.5 |       |       | 224.7 |       |       | 86.0  |       |       |       | 56.6  |
| Travel Time (s)            |                                                                                    | 11.4  |       |       | 13.5  |       |       | 5.2   |       |       |       | 3.4   |
| Peak Hour Factor           | 0.90                                                                               | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  | 0.90  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%    | 2%    | 3%    | 3%    | 2%    | 2%    | 2%    | 2%    | 2%    | 2%    | 2%    |
| Adj. Flow (vph)            | 48                                                                                 | 1313  | 73    | 36    | 760   | 27    | 52    | 3     | 31    | 150   | 3     | 147   |
| Shared Lane Traffic (%)    |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 48                                                                                 | 1313  | 73    | 36    | 787   | 0     | 52    | 34    | 0     | 0     | 153   | 147   |
| Enter Blocked Intersection | No                                                                                 | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left                                                                               | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(m)            |                                                                                    | 3.7   |       |       | 3.7   |       |       | 3.7   |       |       |       | 3.7   |
| Link Offset(m)             |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       |       | 0.0   |
| Crosswalk Width(m)         |                                                                                    | 4.9   |       |       | 4.9   |       |       | 4.9   |       |       |       | 4.9   |
| Two way Left Turn Lane     |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.06                                                                               | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  |
| Turning Speed (k/h)        | 24                                                                                 |       | 14    | 24    |       | 14    | 24    |       | 14    | 24    |       | 14    |
| Number of Detectors        | 1                                                                                  | 2     | 1     | 1     | 2     |       | 1     | 2     |       | 1     | 2     | 1     |
| Detector Template          | Left                                                                               | Thru  | Right | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  | Right |
| Leading Detector (m)       | 6.1                                                                                | 30.5  | 6.1   | 6.1   | 30.5  |       | 6.1   | 30.5  |       | 6.1   | 30.5  | 6.1   |
| Trailing Detector (m)      | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Position(m)     | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Size(m)         | 6.1                                                                                | 1.8   | 6.1   | 6.1   | 1.8   |       | 6.1   | 1.8   |       | 6.1   | 1.8   | 6.1   |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(m)     |                                                                                    | 28.7  |       |       | 28.7  |       |       | 28.7  |       |       |       | 28.7  |
| Detector 2 Size(m)         |                                                                                    | 1.8   |       |       | 1.8   |       |       | 1.8   |       |       |       | 1.8   |
| Detector 2 Type            |                                                                                    | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |       |       | Cl+Ex |
| Detector 2 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       |       | 0.0   |
| Turn Type                  | Perm                                                                               | NA    | Perm  | Perm  | NA    |       | Perm  | NA    |       | Perm  | NA    | Perm  |
| Protected Phases           |                                                                                    | 2     |       |       | 6     |       |       | 8     |       |       |       | 4     |

# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

Existing PM

|                         | ↖     | →     | ↘     | ↙     | ←     | ↖   | ↙     | ↑     | ↗   | ↘     | ↓     | ↙     |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
| Permitted Phases        | 2     |       | 2     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 6     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 29.9  | 29.9  | 29.9  | 29.9  | 29.9  |     | 36.7  | 36.7  |     | 36.7  | 36.7  | 36.7  |
| Total Split (s)         | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  |     | 37.0  | 37.0  |     | 37.0  | 37.0  | 37.0  |
| Total Split (%)         | 63.0% | 63.0% | 63.0% | 63.0% | 63.0% |     | 37.0% | 37.0% |     | 37.0% | 37.0% | 37.0% |
| Maximum Green (s)       | 57.1  | 57.1  | 57.1  | 57.1  | 57.1  |     | 30.3  | 30.3  |     | 30.3  | 30.3  | 30.3  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   |     | 3.3   | 3.3   |     | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   |     | 3.4   | 3.4   |     | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   |     | 6.7   | 6.7   |     |       | 6.7   | 6.7   |
| Lead/Lag                |       |       |       |       |       |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | C-Max | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |     | 23.0  | 23.0  |     | 23.0  | 23.0  | 23.0  |
| Pedestrian Calls (#/hr) | 20    | 20    | 20    | 20    | 20    |     | 30    | 30    |     | 30    | 30    | 30    |
| Act Effect Green (s)    | 64.5  | 64.5  | 64.5  | 64.5  | 64.5  |     | 22.9  | 22.9  |     |       | 22.9  | 22.9  |
| Actuated g/C Ratio      | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  |     | 0.23  | 0.23  |     |       | 0.23  | 0.23  |
| v/c Ratio               | 0.13  | 0.60  | 0.07  | 0.20  | 0.36  |     | 0.20  | 0.09  |     |       | 0.53  | 0.32  |
| Control Delay           | 6.3   | 8.5   | 0.9   | 9.5   | 6.6   |     | 29.3  | 10.5  |     |       | 38.8  | 6.4   |
| Queue Delay             | 0.0   | 0.1   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 6.3   | 8.6   | 0.9   | 9.5   | 6.6   |     | 29.3  | 10.5  |     |       | 38.8  | 6.4   |
| LOS                     | A     | A     | A     | A     | A     |     | C     | B     |     |       | D     | A     |
| Approach Delay          |       | 8.1   |       |       | 6.7   |     |       | 21.9  |     |       | 23.0  |       |
| Approach LOS            |       | A     |       |       | A     |     |       | C     |     |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 9.8

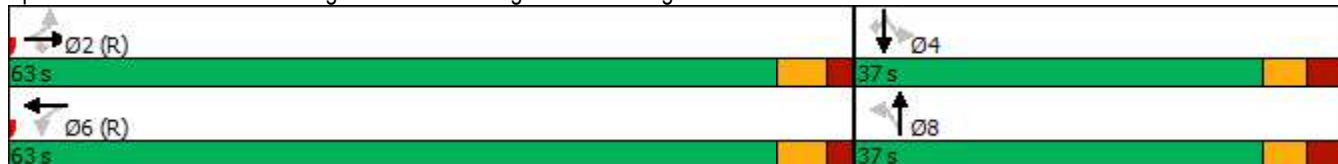
Intersection LOS: A

Intersection Capacity Utilization 62.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road



## 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive &amp; Ogilvie Road

Existing PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 207                                                                               | 860                                                                               | 153                                                                               | 12                                                                                | 665                                                                               | 110                                                                               | 112                                                                                 | 69                                                                                  | 26                                                                                  | 140                                                                                 | 47                                                                                  | 159                                                                                 |
| Future Volume (vph)        | 207                                                                               | 860                                                                               | 153                                                                               | 12                                                                                | 665                                                                               | 110                                                                               | 112                                                                                 | 69                                                                                  | 26                                                                                  | 140                                                                                 | 47                                                                                  | 159                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 40.0                                                                              | 45.0                                                                              |                                                                                   | 70.0                                                                              | 30.0                                                                                |                                                                                     | 0.0                                                                                 | 20.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                                |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.96                                                                              |                                                                                   | 0.90                                                                              | 0.99                                                                              |                                                                                   | 0.83                                                                              | 0.98                                                                                | 0.99                                                                                |                                                                                     | 0.98                                                                                | 0.97                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     | 0.959                                                                               |                                                                                     |                                                                                     | 0.884                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1631                                                                                | 1632                                                                                | 0                                                                                   | 1647                                                                                | 1487                                                                                | 0                                                                                   |
| Flt Permitted              | 0.265                                                                             |                                                                                   |                                                                                   | 0.291                                                                             |                                                                                   |                                                                                   | 0.494                                                                               |                                                                                     |                                                                                     | 0.689                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 450                                                                               | 3357                                                                              | 1349                                                                              | 508                                                                               | 3357                                                                              | 1248                                                                              | 832                                                                                 | 1632                                                                                | 0                                                                                   | 1173                                                                                | 1487                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 121                                                                               |                                                                                   |                                                                                   | 122                                                                               |                                                                                     | 20                                                                                  |                                                                                     |                                                                                     | 177                                                                                 |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 256.0                                                                             |                                                                                   |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                     | 345.6                                                                               |                                                                                     |                                                                                     | 177.6                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.4                                                                              |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                     | 20.7                                                                                |                                                                                     |                                                                                     | 10.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 73                                                                                |                                                                                   | 40                                                                                | 40                                                                                |                                                                                   | 73                                                                                | 27                                                                                  |                                                                                     | 21                                                                                  | 21                                                                                  |                                                                                     | 27                                                                                  |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 230                                                                               | 956                                                                               | 170                                                                               | 13                                                                                | 739                                                                               | 122                                                                               | 124                                                                                 | 77                                                                                  | 29                                                                                  | 156                                                                                 | 52                                                                                  | 177                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 230                                                                               | 956                                                                               | 170                                                                               | 13                                                                                | 739                                                                               | 122                                                                               | 124                                                                                 | 106                                                                                 | 0                                                                                   | 156                                                                                 | 229                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

Existing PM

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive & Ogilvie Road

Existing PM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | pm+pt                                                                             | NA                                                                                | Perm                                                                              | pm+pt                                                                             | NA                                                                                | Perm                                                                              | Perm                                                                                | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                   | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                                | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 37.4                                                                                | 37.4                                                                                |                                                                                     | 37.4                                                                                | 37.4                                                                                |                                                                                     |
| Total Split (s)         | 20.0                                                                              | 37.0                                                                              | 37.0                                                                              | 20.0                                                                              | 37.0                                                                              | 37.0                                                                              | 38.0                                                                                | 38.0                                                                                |                                                                                     | 38.0                                                                                | 38.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 37.0%                                                                             | 37.0%                                                                             | 20.0%                                                                             | 37.0%                                                                             | 37.0%                                                                             | 38.0%                                                                               | 38.0%                                                                               |                                                                                     | 38.0%                                                                               | 38.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 15.3                                                                              | 31.0                                                                              | 31.0                                                                              | 15.3                                                                              | 31.0                                                                              | 31.0                                                                              | 30.6                                                                                | 30.6                                                                                |                                                                                     | 30.6                                                                                | 30.6                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 4.4                                                                                 | 4.4                                                                                 |                                                                                     | 4.4                                                                                 | 4.4                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 7.4                                                                                 | 7.4                                                                                 |                                                                                     | 7.4                                                                                 | 7.4                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                 | Lag                                                                                 |                                                                                     | Lag                                                                                 | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                 | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                                | None                                                                                |                                                                                     | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               | 2.0                                                                                 | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              | 28.0                                                                                | 28.0                                                                                |                                                                                     | 28.0                                                                                | 28.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   | 30                                                                                | 30                                                                                | 20                                                                                  | 20                                                                                  |                                                                                     | 20                                                                                  | 20                                                                                  |                                                                                     |
| Act Effect Green (s)    | 62.0                                                                              | 58.5                                                                              | 58.5                                                                              | 51.5                                                                              | 44.3                                                                              | 44.3                                                                              | 20.9                                                                                | 20.9                                                                                |                                                                                     | 20.9                                                                                | 20.9                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.62                                                                              | 0.58                                                                              | 0.58                                                                              | 0.52                                                                              | 0.44                                                                              | 0.44                                                                              | 0.21                                                                                | 0.21                                                                                |                                                                                     | 0.21                                                                                | 0.21                                                                                |                                                                                     |
| v/c Ratio               | 0.54                                                                              | 0.49                                                                              | 0.20                                                                              | 0.04                                                                              | 0.50                                                                              | 0.20                                                                              | 0.72                                                                                | 0.30                                                                                |                                                                                     | 0.64                                                                                | 0.51                                                                                |                                                                                     |
| Control Delay           | 19.9                                                                              | 14.1                                                                              | 7.1                                                                               | 7.6                                                                               | 15.0                                                                              | 1.5                                                                               | 57.4                                                                                | 26.5                                                                                |                                                                                     | 46.4                                                                                | 12.2                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 19.9                                                                              | 14.1                                                                              | 7.1                                                                               | 7.6                                                                               | 15.0                                                                              | 1.5                                                                               | 57.4                                                                                | 26.5                                                                                |                                                                                     | 46.4                                                                                | 12.2                                                                                |                                                                                     |
| LOS                     | B                                                                                 | B                                                                                 | A                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | E                                                                                   | C                                                                                   |                                                                                     | D                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 14.2                                                                              |                                                                                   |                                                                                   | 13.0                                                                              |                                                                                   |                                                                                     | 43.1                                                                                |                                                                                     |                                                                                     | 26.1                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | D                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 19 (19%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 17.8

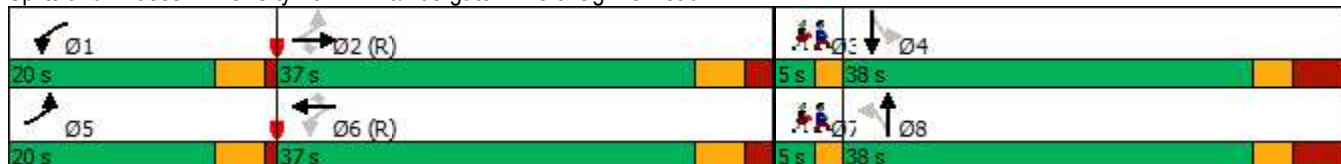
Intersection LOS: B

Intersection Capacity Utilization 82.6%

ICU Level of Service E

Analysis Period (min) 15

### Splits and Phases: 15: City Park Drive/Bathgate Drive & Ogilvie Road



1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

Existing PM

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | Ped  | Ped  |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 20   | 20   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

1900/2000 City Park Drive  
18: Palmerston Drive/Matheson Road & Ogilvie Road

Existing PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 188                                                                               | 1419                                                                              | 61                                                                                | 94                                                                                | 1094                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Future Volume (vph)        | 188                                                                               | 1419                                                                              | 61                                                                                | 94                                                                                | 1094                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 70.0                                                                              |                                                                                   | 0.0                                                                               | 15.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 35.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                                | 0.98                                                                                |                                                                                     |                                                                                     | 0.99                                                                                | 0.99                                                                                |
| Frt                        |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                   | 0.995                                                                             |                                                                                   |                                                                                     | 0.863                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.957                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3356                                                                              | 0                                                                                 | 1695                                                                              | 3364                                                                              | 0                                                                                 | 1662                                                                                | 1474                                                                                | 0                                                                                   | 0                                                                                   | 1708                                                                                | 1517                                                                                |
| Flt Permitted              | 0.158                                                                             |                                                                                   |                                                                                   | 0.091                                                                             |                                                                                   |                                                                                   | 0.734                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.716                                                                               |                                                                                     |
| Satd. Flow (perm)          | 282                                                                               | 3356                                                                              | 0                                                                                 | 162                                                                               | 3364                                                                              | 0                                                                                 | 1263                                                                                | 1474                                                                                | 0                                                                                   | 0                                                                                   | 1265                                                                                | 1497                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                     | 43                                                                                  |                                                                                     |                                                                                     |                                                                                     | 107                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 314.1                                                                             |                                                                                   |                                                                                   | 266.1                                                                             |                                                                                   |                                                                                     | 176.2                                                                               |                                                                                     |                                                                                     |                                                                                     | 174.1                                                                               |
| Travel Time (s)            |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                   | 16.0                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     |                                                                                     | 10.4                                                                                |
| Confl. Peds. (#/hr)        | 24                                                                                |                                                                                   | 34                                                                                | 34                                                                                |                                                                                   | 24                                                                                | 16                                                                                  |                                                                                     | 11                                                                                  | 11                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 22                                                                                |                                                                                     |                                                                                     | 3                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                  | 4%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 209                                                                               | 1577                                                                              | 68                                                                                | 104                                                                               | 1216                                                                              | 42                                                                                | 58                                                                                  | 4                                                                                   | 43                                                                                  | 32                                                                                  | 4                                                                                   | 107                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 209                                                                               | 1645                                                                              | 0                                                                                 | 104                                                                               | 1258                                                                              | 0                                                                                 | 58                                                                                  | 47                                                                                  | 0                                                                                   | 0                                                                                   | 36                                                                                  | 107                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 1900/2000 City Park Drive

## 18: Palmerston Drive/Matheson Road & Ogilvie Road

Existing PM

|                         | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
| Detector 2 Extend (s)   |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |       |
| Turn Type               | pm+pt | NA    |     | pm+pt | NA    |     | Perm  | NA    |     | Perm  | NA    | Perm  |
| Protected Phases        | 5     | 2     |     | 1     | 6     |     |       | 8     |     |       | 4     |       |
| Permitted Phases        | 2     |       |     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 5     | 2     |     | 1     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 5.0   | 10.0  |     | 5.0   | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.7   | 33.6  |     | 9.7   | 33.6  |     | 40.2  | 40.2  |     | 40.2  | 40.2  | 40.2  |
| Total Split (s)         | 15.0  | 65.0  |     | 15.0  | 65.0  |     | 40.0  | 40.0  |     | 40.0  | 40.0  | 40.0  |
| Total Split (%)         | 12.5% | 54.2% |     | 12.5% | 54.2% |     | 33.3% | 33.3% |     | 33.3% | 33.3% | 33.3% |
| Maximum Green (s)       | 10.3  | 59.4  |     | 10.3  | 59.4  |     | 32.8  | 32.8  |     | 32.8  | 32.8  | 32.8  |
| Yellow Time (s)         | 3.7   | 3.7   |     | 3.7   | 3.7   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 1.0   | 1.9   |     | 1.0   | 1.9   |     | 4.2   | 4.2   |     | 4.2   | 4.2   | 4.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 4.7   | 5.6   |     | 4.7   | 5.6   |     | 7.2   | 7.2   |     |       | 7.2   | 7.2   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   |     | Yes   | Yes   |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  | C-Max |     | None  | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           |       | 15.0  |     |       | 15.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 13.0  |     |       | 13.0  |     | 26.0  | 26.0  |     | 26.0  | 26.0  | 26.0  |
| Pedestrian Calls (#/hr) |       | 25    |     |       | 25    |     | 10    | 10    |     | 10    | 10    | 10    |
| Act Effect Green (s)    | 90.6  | 78.9  |     | 85.5  | 76.3  |     | 15.3  | 15.3  |     |       | 15.3  | 15.3  |
| Actuated g/C Ratio      | 0.76  | 0.66  |     | 0.71  | 0.64  |     | 0.13  | 0.13  |     |       | 0.13  | 0.13  |
| v/c Ratio               | 0.61  | 0.75  |     | 0.47  | 0.59  |     | 0.36  | 0.21  |     |       | 0.22  | 0.38  |
| Control Delay           | 15.4  | 18.6  |     | 15.0  | 15.7  |     | 51.2  | 15.1  |     |       | 46.6  | 11.1  |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 15.4  | 18.6  |     | 15.0  | 15.7  |     | 51.2  | 15.1  |     |       | 46.6  | 11.1  |
| LOS                     | B     | B     |     | B     | B     |     | D     | B     |     |       | D     | B     |
| Approach Delay          |       | 18.3  |     |       | 15.7  |     |       | 35.0  |     |       | 20.0  |       |
| Approach LOS            |       | B     |     |       | B     |     |       | D     |     |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 17.8

Intersection LOS: B

Intersection Capacity Utilization 78.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 18: Palmerston Drive/Matheson Road & Ogilvie Road



Synchro 11 Report

04/04/2023

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

Existing PM

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |  |                                                                                   |  |
| Traffic Volume (vph)       | 208                                                                               | 826                                                                               | 707                                                                               | 166                                                                               | 425                                                                               | 871                                                                               |
| Future Volume (vph)        | 208                                                                               | 826                                                                               | 707                                                                               | 166                                                                               | 425                                                                               | 871                                                                               |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Storage Length (m)         | 0.0                                                                               | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   |
| Storage Lanes              | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.984                                                                             |
| Satd. Flow (prot)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 3210                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.531                                                                             |
| Satd. Flow (perm)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 1732                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 590                                                                               |                                                                                   | 184                                                                               |                                                                                   |                                                                                   |
| Link Speed (k/h)           | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)          | 216.4                                                                             |                                                                                   | 230.9                                                                             |                                                                                   |                                                                                   | 341.9                                                                             |
| Travel Time (s)            | 13.0                                                                              |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 20.5                                                                              |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              |
| Heavy Vehicles (%)         | 5%                                                                                | 5%                                                                                | 4%                                                                                | 4%                                                                                | 6%                                                                                | 6%                                                                                |
| Adj. Flow (vph)            | 231                                                                               | 918                                                                               | 786                                                                               | 184                                                                               | 472                                                                               | 968                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 231                                                                               | 918                                                                               | 786                                                                               | 184                                                                               | 0                                                                                 | 1440                                                                              |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)            | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)             | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)         | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)        | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |
| Leading Detector (m)       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Size(m)         | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 2 Position(m)     |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |
| Detector 2 Size(m)         |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |
| Detector 2 Type            |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Turn Type                  | Prot                                                                              | Free                                                                              | NA                                                                                | pm+ov                                                                             | pm+pt                                                                             | NA                                                                                |
| Protected Phases           | 8                                                                                 |                                                                                   | 2                                                                                 | 8                                                                                 | 1                                                                                 | 6                                                                                 |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

Existing PM



| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Permitted Phases        | Free  |       |       | 2     | 6     |       |
| Detector Phase          | 8     |       | 2     | 8     | 1     | 6     |
| Switch Phase            |       |       |       |       |       |       |
| Minimum Initial (s)     | 5.0   |       | 10.0  | 5.0   | 5.0   | 1.0   |
| Minimum Split (s)       | 25.3  |       | 30.5  | 25.3  | 11.0  | 30.5  |
| Total Split (s)         | 30.0  |       | 52.0  | 30.0  | 28.0  | 80.0  |
| Total Split (%)         | 27.3% |       | 47.3% | 27.3% | 25.5% | 72.7% |
| Maximum Green (s)       | 23.7  |       | 45.5  | 23.7  | 22.0  | 73.5  |
| Yellow Time (s)         | 3.3   |       | 4.2   | 3.3   | 4.2   | 4.2   |
| All-Red Time (s)        | 3.0   |       | 2.3   | 3.0   | 1.8   | 2.3   |
| Lost Time Adjust (s)    | 0.0   |       | 0.0   | 0.0   |       | 0.0   |
| Total Lost Time (s)     | 6.3   |       | 6.5   | 6.3   |       | 6.5   |
| Lead/Lag                |       |       | Lag   |       | Lead  |       |
| Lead-Lag Optimize?      |       |       | Yes   |       | Yes   |       |
| Vehicle Extension (s)   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  |       | C-Max | None  | Max   | C-Max |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 12.0  |       | 17.0  | 12.0  |       | 17.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     | 0     |       | 0     |
| Act Effect Green (s)    | 19.7  | 110.0 | 45.5  | 71.7  |       | 77.5  |
| Actuated g/C Ratio      | 0.18  | 1.00  | 0.41  | 0.65  |       | 0.70  |
| v/c Ratio               | 0.78  | 0.62  | 0.57  | 0.18  |       | 0.92  |
| Control Delay           | 61.2  | 2.0   | 26.8  | 1.2   |       | 22.8  |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay             | 61.2  | 2.0   | 26.8  | 1.2   |       | 22.8  |
| LOS                     | E     | A     | C     | A     |       | C     |
| Approach Delay          | 13.9  |       | 22.0  |       |       | 22.8  |
| Approach LOS            | B     |       | C     |       |       | C     |

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 19.7

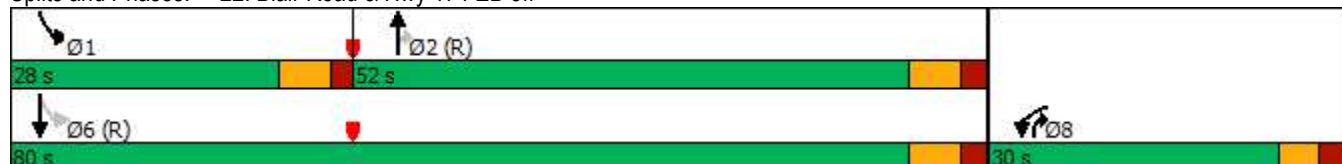
Intersection LOS: B

Intersection Capacity Utilization 87.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 22: Blair Road & Hwy 174 EB off



1900/2000 City Park Drive  
26: Residential/Cadboro Road & Ogilvie Road

Existing PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |                                                                                     |  |                                                                                     |                                                                                     |  |
| Traffic Volume (vph)       | 0                                                                                 | 1526                                                                              | 14                                                                                | 0                                                                                 | 994                                                                               | 70                                                                                | 0                                                                                  | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Future Volume (vph)        | 0                                                                                 | 1526                                                                              | 14                                                                                | 0                                                                                 | 994                                                                               | 70                                                                                | 0                                                                                  | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Fr't                       |                                                                                   | 0.999                                                                             |                                                                                   |                                                                                   | 0.990                                                                             |                                                                                   |                                                                                    |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     | 0.865                                                                               |
| Flt Protected              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3356                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3356                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                    |                                                                                     | 33                                                                                  |                                                                                     |                                                                                     | 71                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 266.1                                                                             |                                                                                   |                                                                                   | 256.0                                                                             |                                                                                   |                                                                                    | 114.0                                                                               |                                                                                     |                                                                                     | 107.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 16.0                                                                              |                                                                                   |                                                                                   | 15.4                                                                              |                                                                                   |                                                                                    | 6.8                                                                                 |                                                                                     |                                                                                     | 6.4                                                                                 |                                                                                     |
| Peak Hour Factor           | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                               | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                | 0.90                                                                                |
| Adj. Flow (vph)            | 0                                                                                 | 1696                                                                              | 16                                                                                | 0                                                                                 | 1104                                                                              | 78                                                                                | 0                                                                                  | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 108                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 1712                                                                              | 0                                                                                 | 0                                                                                 | 1182                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 108                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                    | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                    |                                                                                     | 1                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Detector Template          |                                                                                   | Thru                                                                              |                                                                                   |                                                                                   | Thru                                                                              |                                                                                   |                                                                                    |                                                                                     | Right                                                                               |                                                                                     |                                                                                     | Right                                                                               |
| Leading Detector (m)       |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Trailing Detector (m)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Position(m)     |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                    |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Detector 1 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Queue (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Delay (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type                  |                                                                                   | NA                                                                                |                                                                                   |                                                                                   | NA                                                                                |                                                                                   |                                                                                    |                                                                                     | Perm                                                                                |                                                                                     |                                                                                     | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Permitted Phases           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Detector Phase             |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |

1900/2000 City Park Drive  
26: Residential/Cadboro Road & Ogilvie Road

Existing PM

|                         |  |       |     |     |       |     |     |     |       |     |      |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-----|-------|-----|-----|-----|-------|-----|------|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL | WBT   | WBR | NBL | NBT | NBR   | SBL | SBT  | SBR   |
| Minimum Split (s)       |                                                                                    | 35.0  |     |     | 35.0  |     |     |     | 40.0  |     |      | 40.0  |
| Total Split (s)         |                                                                                    | 60.0  |     |     | 60.0  |     |     |     | 40.0  |     |      | 40.0  |
| Total Split (%)         |                                                                                    | 60.0% |     |     | 60.0% |     |     |     | 40.0% |     |      | 40.0% |
| Maximum Green (s)       |                                                                                    | 54.0  |     |     | 54.0  |     |     |     | 36.0  |     |      | 36.0  |
| Yellow Time (s)         |                                                                                    | 3.7   |     |     | 3.7   |     |     |     | 3.0   |     |      | 3.0   |
| All-Red Time (s)        |                                                                                    | 2.3   |     |     | 2.3   |     |     |     | 1.0   |     |      | 1.0   |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |      | 0.0   |
| Total Lost Time (s)     |                                                                                    | 6.0   |     |     | 6.0   |     |     |     | 4.0   |     |      | 4.0   |
| Lead/Lag                |                                                                                    |       |     |     |       |     |     |     |       |     |      |       |
| Lead-Lag Optimize?      |                                                                                    |       |     |     |       |     |     |     |       |     |      |       |
| Vehicle Extension (s)   |                                                                                    | 3.0   |     |     | 3.0   |     |     |     | 3.0   |     |      | 3.0   |
| Recall Mode             |                                                                                    | C-Max |     |     | C-Max |     |     |     | None  |     |      | None  |
| Walk Time (s)           |                                                                                    | 15.0  |     |     | 15.0  |     |     |     | 24.0  |     |      | 24.0  |
| Flash Dont Walk (s)     |                                                                                    | 14.0  |     |     | 14.0  |     |     |     | 12.0  |     |      | 12.0  |
| Pedestrian Calls (#/hr) |                                                                                    | 30    |     |     | 30    |     |     |     | 20    |     |      | 20    |
| Act Effct Green (s)     |                                                                                    | 71.8  |     |     | 71.8  |     |     |     | 18.2  |     |      | 18.2  |
| Actuated g/C Ratio      |                                                                                    | 0.72  |     |     | 0.72  |     |     |     | 0.18  |     |      | 0.18  |
| v/c Ratio               |                                                                                    | 0.70  |     |     | 0.49  |     |     |     | 0.00  |     |      | 0.32  |
| Control Delay           |                                                                                    | 14.5  |     |     | 8.1   |     |     |     | 0.0   |     |      | 13.4  |
| Queue Delay             |                                                                                    | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |      | 0.0   |
| Total Delay             |                                                                                    | 14.5  |     |     | 8.1   |     |     |     | 0.0   |     |      | 13.4  |
| LOS                     |                                                                                    | B     |     |     | A     |     |     |     | A     |     |      | B     |
| Approach Delay          |                                                                                    | 14.5  |     |     | 8.1   |     |     |     |       |     | 13.4 |       |
| Approach LOS            |                                                                                    | B     |     |     | A     |     |     |     |       |     | B    |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 4 (4%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 11.9

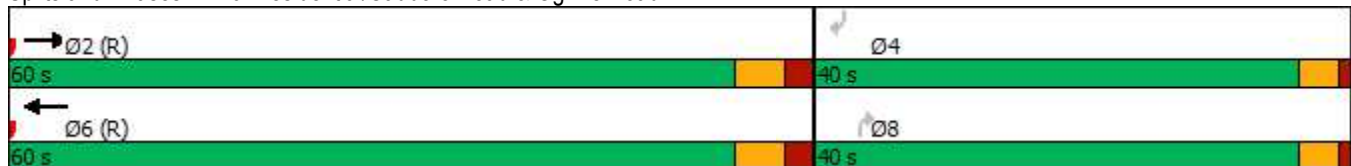
Intersection LOS: B

Intersection Capacity Utilization 57.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 26: Residential/Cadboro Road & Ogilvie Road



1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

BG 2037 AM

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 87                                                                                | 442                                                                               | 195                                                                               | 644                                                                               | 739                                                                               | 50                                                                                | 645                                                                                 | 663                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 111                                                                                 |
| Future Volume (vph)        | 87                                                                                | 442                                                                               | 195                                                                               | 644                                                                               | 739                                                                               | 50                                                                                | 645                                                                                 | 663                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 111                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 110.0                                                                             |                                                                                   | 0.0                                                                               | 120.0                                                                               |                                                                                     | 0.0                                                                                 | 30.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 0                                                                                 | 2                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 40.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.97                                                                              | 0.95                                                                              | 0.95                                                                              | 0.97                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.99                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.990                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     | 0.963                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3307                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3190                                                                                | 0                                                                                   |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3307                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3190                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 195                                                                               |                                                                                   | 5                                                                                 |                                                                                   |                                                                                     |                                                                                     | 421                                                                                 |                                                                                     | 30                                                                                  |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                   | 396.5                                                                             |                                                                                   |                                                                                     | 239.9                                                                               |                                                                                     |                                                                                     | 411.0                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                   | 23.8                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 25                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 27                                                                                  |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 3                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 3                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 87                                                                                | 442                                                                               | 195                                                                               | 644                                                                               | 739                                                                               | 50                                                                                | 645                                                                                 | 663                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 111                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 87                                                                                | 442                                                                               | 195                                                                               | 644                                                                               | 789                                                                               | 0                                                                                 | 645                                                                                 | 663                                                                                 | 624                                                                                 | 69                                                                                  | 445                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

BG 2037 AM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                |                                                                                   | Prot                                                                               | NA                                                                                  | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   | 3                                                                                  | 8                                                                                   |                                                                                     | 7                                                                                   | 4                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 |                                                                                   | 3                                                                                  | 8                                                                                   | 8                                                                                   | 7                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              |                                                                                   | 5.0                                                                                | 10.0                                                                                | 10.0                                                                                | 5.0                                                                                 | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 11.8                                                                              | 38.6                                                                              | 38.6                                                                              | 11.8                                                                              | 38.6                                                                              |                                                                                   | 11.5                                                                               | 35.5                                                                                | 35.5                                                                                | 11.5                                                                                | 35.5                                                                                |                                                                                     |
| Total Split (s)         | 28.0                                                                              | 39.0                                                                              | 39.0                                                                              | 28.0                                                                              | 39.0                                                                              |                                                                                   | 36.0                                                                               | 58.0                                                                                | 58.0                                                                                | 15.0                                                                                | 37.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 27.9%                                                                             | 27.9%                                                                             | 20.0%                                                                             | 27.9%                                                                             |                                                                                   | 25.7%                                                                              | 41.4%                                                                               | 41.4%                                                                               | 10.7%                                                                               | 26.4%                                                                               |                                                                                     |
| Maximum Green (s)       | 21.2                                                                              | 32.4                                                                              | 32.4                                                                              | 21.2                                                                              | 32.4                                                                              |                                                                                   | 29.5                                                                               | 51.5                                                                                | 51.5                                                                                | 8.5                                                                                 | 30.5                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.3                                                                               | 3.3                                                                               | 3.7                                                                               | 3.3                                                                               |                                                                                   | 4.2                                                                                | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 3.1                                                                               | 3.3                                                                               | 3.3                                                                               | 3.1                                                                               | 3.3                                                                               |                                                                                   | 2.3                                                                                | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 6.8                                                                               | 6.6                                                                               | 6.6                                                                               | 6.8                                                                               | 6.6                                                                               |                                                                                   | 6.5                                                                                | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                               | Lag                                                                                 | Lag                                                                                 | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               |                                                                                   | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | Max                                                                               | Max                                                                               | None                                                                              | Max                                                                               |                                                                                   | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 | 7.0                                                                                 |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                    | 22.0                                                                                | 22.0                                                                                |                                                                                     | 22.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 20                                                                                | 20                                                                                |                                                                                   | 20                                                                                |                                                                                   |                                                                                    | 25                                                                                  | 25                                                                                  |                                                                                     | 25                                                                                  |                                                                                     |
| Act Effect Green (s)    | 12.6                                                                              | 32.4                                                                              | 32.4                                                                              | 21.2                                                                              | 41.0                                                                              |                                                                                   | 29.2                                                                               | 51.5                                                                                | 51.5                                                                                | 8.2                                                                                 | 30.6                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.09                                                                              | 0.23                                                                              | 0.23                                                                              | 0.15                                                                              | 0.29                                                                              |                                                                                   | 0.21                                                                               | 0.37                                                                                | 0.37                                                                                | 0.06                                                                                | 0.22                                                                                |                                                                                     |
| v/c Ratio               | 0.58                                                                              | 0.57                                                                              | 0.39                                                                              | 1.30                                                                              | 0.81                                                                              |                                                                                   | 0.95                                                                               | 1.02                                                                                | 0.76                                                                                | 0.70                                                                                | 0.62                                                                                |                                                                                     |
| Control Delay           | 75.4                                                                              | 50.9                                                                              | 8.1                                                                               | 196.3                                                                             | 53.5                                                                              |                                                                                   | 78.5                                                                               | 83.3                                                                                | 18.8                                                                                | 99.2                                                                                | 50.2                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 75.4                                                                              | 50.9                                                                              | 8.1                                                                               | 196.3                                                                             | 53.5                                                                              |                                                                                   | 78.5                                                                               | 83.3                                                                                | 18.8                                                                                | 99.2                                                                                | 50.2                                                                                |                                                                                     |
| LOS                     | E                                                                                 | D                                                                                 | A                                                                                 | F                                                                                 | D                                                                                 |                                                                                   | E                                                                                  | F                                                                                   | B                                                                                   | F                                                                                   | D                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 42.3                                                                              |                                                                                   |                                                                                   | 117.7                                                                             |                                                                                   |                                                                                    | 60.9                                                                                |                                                                                     |                                                                                     | 56.8                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | F                                                                                 |                                                                                   |                                                                                    | E                                                                                   |                                                                                     |                                                                                     | E                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 139.7

Natural Cycle: 150

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.30

Intersection Signal Delay: 75.2

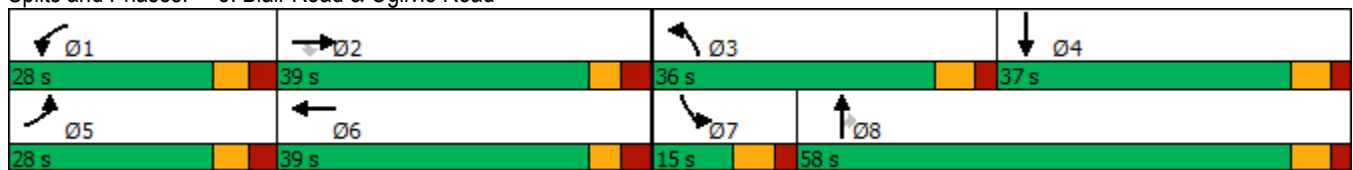
Intersection LOS: E

Intersection Capacity Utilization 95.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3: Blair Road & Ogilvie Road



## 1900/2000 City Park Drive

## 6: Blair Road &amp; 1980 Ogilvie Road/Hwy 174 WB off

BG 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |                                                                                   |  |  |  |  |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 87                                                                                | 0                                                                                 | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                               | 281                                                                                 | 1455                                                                                | 0                                                                                   | 0                                                                                   | 866                                                                                 | 109                                                                                 |
| Future Volume (vph)        | 87                                                                                | 0                                                                                 | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                               | 281                                                                                 | 1455                                                                                | 0                                                                                   | 0                                                                                   | 866                                                                                 | 109                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   | 70.0                                                                              | 60.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 50.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                   | 100.0                                                                               |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.97                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.91                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1340                                                                              | 0                                                                                 | 1199                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4732                                                                                | 1473                                                                                |
| Flt Permitted              | 0.662                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 934                                                                               | 0                                                                                 | 1199                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4732                                                                                | 1473                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 34                                                                                |                                                                                   |                                                                                   | 104                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 111                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 518.9                                                                             |                                                                                   |                                                                                   | 416.4                                                                             |                                                                                   |                                                                                     | 90.2                                                                                |                                                                                     |                                                                                     | 239.9                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 31.1                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 14.4                                                                                |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 29%                                                                               | 29%                                                                               | 29%                                                                               | 2%                                                                                | 2%                                                                                | 2%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 87                                                                                | 0                                                                                 | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                               | 281                                                                                 | 1455                                                                                | 0                                                                                   | 0                                                                                   | 866                                                                                 | 109                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 87                                                                                | 0                                                                                 | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                               | 281                                                                                 | 1455                                                                                | 0                                                                                   | 0                                                                                   | 866                                                                                 | 109                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              |                                                                                   | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     |                                                                                     | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     |                                                                                     | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              |                                                                                   | pm+ov                                                                             | Perm                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                                | NA                                                                                  |                                                                                     |                                                                                     | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   | 8                                                                                 |                                                                                   | 5                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |

1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

BG 2037 AM

| Lane Group              | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL | SBT   | SBR   |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Permitted Phases        | 4     |      | 4     | 8     |       | 8     |       |       |     |     |       | 6     |
| Detector Phase          | 4     |      | 5     | 8     | 8     | 8     | 5     | 2     |     |     | 6     | 6     |
| Switch Phase            |       |      |       |       |       |       |       |       |     |     |       |       |
| Minimum Initial (s)     | 10.0  |      | 5.0   | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  |     |     | 10.0  | 10.0  |
| Minimum Split (s)       | 16.8  |      | 11.4  | 36.8  | 36.8  | 36.8  | 11.4  | 30.1  |     |     | 30.1  | 30.1  |
| Total Split (s)         | 41.0  |      | 27.0  | 41.0  | 41.0  | 41.0  | 27.0  | 59.0  |     |     | 32.0  | 32.0  |
| Total Split (%)         | 41.0% |      | 27.0% | 41.0% | 41.0% | 41.0% | 27.0% | 59.0% |     |     | 32.0% | 32.0% |
| Maximum Green (s)       | 34.2  |      | 20.6  | 34.2  | 34.2  | 34.2  | 20.6  | 52.9  |     |     | 25.9  | 25.9  |
| Yellow Time (s)         | 3.3   |      | 4.2   | 3.3   | 3.3   | 3.3   | 4.2   | 4.2   |     |     | 4.2   | 4.2   |
| All-Red Time (s)        | 3.5   |      | 2.2   | 3.5   | 3.5   | 3.5   | 2.2   | 1.9   |     |     | 1.9   | 1.9   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.8   |      | 6.4   | 6.8   | 6.8   | 6.8   | 6.4   | 6.1   |     |     | 6.1   | 6.1   |
| Lead/Lag                |       |      | Lead  |       |       |       | Lead  |       |     |     | Lag   | Lag   |
| Lead-Lag Optimize?      |       |      | Yes   |       |       |       | Yes   |       |     |     | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |     | 3.0   | 3.0   |
| Recall Mode             | None  |      | None  | None  | None  | None  | None  | Max   |     |     | Max   | Max   |
| Walk Time (s)           |       |      |       | 7.0   | 7.0   | 7.0   |       | 7.0   |     |     | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |      |       | 23.0  | 23.0  | 23.0  |       | 17.0  |     |     | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |       |      |       | 20    | 20    | 20    |       | 20    |     |     | 20    | 20    |
| Act Effct Green (s)     | 19.5  |      | 39.6  | 19.5  | 19.5  | 19.5  | 13.2  | 53.4  |     |     | 33.8  | 33.8  |
| Actuated g/C Ratio      | 0.23  |      | 0.46  | 0.23  | 0.23  | 0.23  | 0.15  | 0.62  |     |     | 0.39  | 0.39  |
| v/c Ratio               | 0.41  |      | 0.65  | 0.30  | 0.37  | 0.71  | 0.58  | 0.72  |     |     | 0.47  | 0.17  |
| Control Delay           | 33.2  |      | 20.7  | 28.3  | 29.6  | 28.9  | 39.5  | 15.5  |     |     | 22.7  | 5.8   |
| Queue Delay             | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Delay             | 33.2  |      | 20.7  | 28.3  | 29.6  | 28.9  | 39.5  | 15.5  |     |     | 22.7  | 5.8   |
| LOS                     | C     |      | C     | C     | C     | C     | D     | B     |     |     | C     | A     |
| Approach Delay          |       | 23.1 |       |       | 29.0  |       |       | 19.4  |     |     | 20.8  |       |
| Approach LOS            |       | C    |       |       | C     |       |       | B     |     |     | C     |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 86

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 21.7

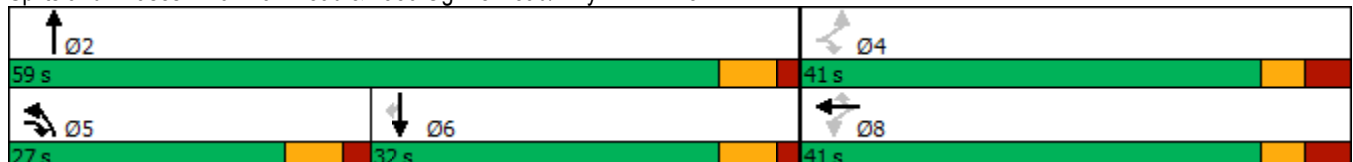
Intersection LOS: C

Intersection Capacity Utilization 81.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off



1900/2000 City Park Drive

9: City Park Drive/1941 Ogilvie & Ogilvie Road

BG 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                    |  |  |  |  |  |
| Traffic Volume (vph)       | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 61                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Future Volume (vph)        | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 61                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                  |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.97                                                                              |                                                                                   | 0.87                                                                              | 0.96                                                                              |                                                                                   | 0.81                                                                              |                                                                                    | 0.96                                                                                | 0.93                                                                                | 0.95                                                                                |                                                                                     |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.965                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                  | 1626                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.243                                                                             |                                                                                   |                                                                                   | 0.378                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.786                                                                               |                                                                                     | 0.704                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 420                                                                               | 3390                                                                              | 1320                                                                              | 641                                                                               | 3357                                                                              | 1211                                                                              | 0                                                                                  | 1269                                                                                | 1334                                                                                | 1193                                                                                | 1784                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 78                                                                                |                                                                                   |                                                                                   | 174                                                                               |                                                                                    |                                                                                     | 61                                                                                  |                                                                                     |                                                                                     | 56                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                    | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                    | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 100                                                                               |                                                                                   | 65                                                                                | 65                                                                                |                                                                                   | 100                                                                               | 53                                                                                 |                                                                                     | 51                                                                                  | 51                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                 | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 61                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 0                                                                                  | 82                                                                                  | 61                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Confl. Bikes (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |

1900/2000 City Park Drive

9: City Park Drive/1941 Ogilvie & Ogilvie Road

BG 2037 AM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                               | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 6                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                  | 8                                                                                   | 8                                                                                   | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                               | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 33.5                                                                               | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                |
| Total Split (s)         | 61.0                                                                              | 61.0                                                                              | 61.0                                                                              | 61.0                                                                              | 61.0                                                                              | 61.0                                                                              | 34.0                                                                               | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                |
| Total Split (%)         | 61.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 34.0%                                                                              | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               |
| Maximum Green (s)       | 54.9                                                                              | 54.9                                                                              | 54.9                                                                              | 54.9                                                                              | 54.9                                                                              | 54.9                                                                              | 27.5                                                                               | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.3                                                                                | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 |
| All-Red Time (s)        | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 3.2                                                                                | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                    | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               |                                                                                    | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lag                                                                                | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 2.0                                                                                | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |
| Flash Dont Walk (s)     | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              | 25.0                                                                               | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                |
| Pedestrian Calls (#/hr) | 35                                                                                | 35                                                                                | 35                                                                                | 35                                                                                | 35                                                                                | 35                                                                                | 35                                                                                 | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  |
| Act Effect Green (s)    | 68.7                                                                              | 68.7                                                                              | 68.7                                                                              | 68.7                                                                              | 68.7                                                                              | 68.7                                                                              |                                                                                    | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                |
| Actuated g/C Ratio      | 0.69                                                                              | 0.69                                                                              | 0.69                                                                              | 0.69                                                                              | 0.69                                                                              | 0.69                                                                              |                                                                                    | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                |
| v/c Ratio               | 0.35                                                                              | 0.29                                                                              | 0.08                                                                              | 0.20                                                                              | 0.44                                                                              | 0.20                                                                              |                                                                                    | 0.32                                                                                | 0.19                                                                                | 0.02                                                                                | 0.01                                                                                | 0.03                                                                                |
| Control Delay           | 8.1                                                                               | 2.9                                                                               | 0.3                                                                               | 11.7                                                                              | 11.4                                                                              | 2.3                                                                               |                                                                                    | 34.8                                                                                | 9.1                                                                                 | 27.2                                                                                | 27.0                                                                                | 0.1                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                    | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 8.1                                                                               | 2.9                                                                               | 0.3                                                                               | 11.7                                                                              | 11.4                                                                              | 2.3                                                                               |                                                                                    | 34.8                                                                                | 9.1                                                                                 | 27.2                                                                                | 27.0                                                                                | 0.1                                                                                 |
| LOS                     | A                                                                                 | A                                                                                 | A                                                                                 | B                                                                                 | B                                                                                 | A                                                                                 |                                                                                    | C                                                                                   | A                                                                                   | C                                                                                   | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 3.3                                                                               |                                                                                   |                                                                                   | 10.2                                                                              |                                                                                   |                                                                                    | 23.8                                                                                |                                                                                     |                                                                                     | 11.9                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | C                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 13 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 8.5

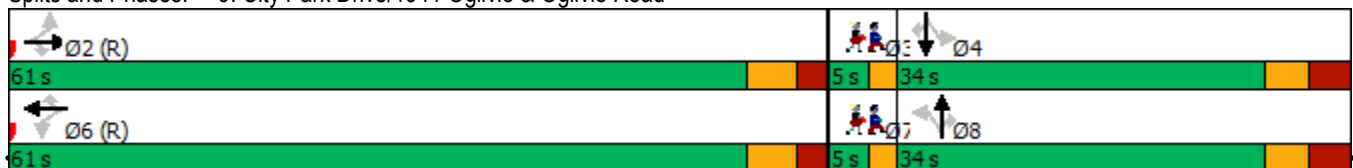
Intersection LOS: A

Intersection Capacity Utilization 74.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



Synchro 11 Report

04/04/2023

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Detector 2 Extend (s)   |      |      |
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

## 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road &amp; Ogilvie Road

BG 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 99                                                                                | 832                                                                               | 27                                                                                | 19                                                                                | 1151                                                                              | 44                                                                                | 9                                                                                   | 1                                                                                   | 12                                                                                  | 42                                                                                  | 11                                                                                  | 63                                                                                  |
| Future Volume (vph)        | 99                                                                                | 832                                                                               | 27                                                                                | 19                                                                                | 1151                                                                              | 44                                                                                | 9                                                                                   | 1                                                                                   | 12                                                                                  | 42                                                                                  | 11                                                                                  | 63                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 60.0                                                                              |                                                                                   | 80.0                                                                              | 90.0                                                                              |                                                                                   | 0.0                                                                               | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 20.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.99                                                                              |                                                                                   | 0.95                                                                              | 0.99                                                                              | 1.00                                                                              |                                                                                   | 0.96                                                                                | 0.95                                                                                |                                                                                     |                                                                                     | 0.96                                                                                | 0.94                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                     | 0.862                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.962                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3324                                                                              | 0                                                                                 | 1695                                                                                | 1454                                                                                | 0                                                                                   | 0                                                                                   | 1717                                                                                | 1517                                                                                |
| Flt Permitted              | 0.195                                                                             |                                                                                   |                                                                                   | 0.316                                                                             |                                                                                   |                                                                                   | 0.722                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.774                                                                               |                                                                                     |
| Satd. Flow (perm)          | 344                                                                               | 3390                                                                              | 1434                                                                              | 553                                                                               | 3324                                                                              | 0                                                                                 | 1232                                                                                | 1454                                                                                | 0                                                                                   | 0                                                                                   | 1329                                                                                | 1429                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 40                                                                                |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     |                                                                                     | 61                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                     | 86.0                                                                                |                                                                                     |                                                                                     |                                                                                     | 56.6                                                                                |
| Travel Time (s)            |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                     | 5.2                                                                                 |                                                                                     |                                                                                     |                                                                                     | 3.4                                                                                 |
| Confl. Peds. (#/hr)        | 41                                                                                |                                                                                   | 17                                                                                | 17                                                                                |                                                                                   | 41                                                                                | 47                                                                                  |                                                                                     | 48                                                                                  | 48                                                                                  |                                                                                     | 47                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 99                                                                                | 832                                                                               | 27                                                                                | 19                                                                                | 1151                                                                              | 44                                                                                | 9                                                                                   | 1                                                                                   | 12                                                                                  | 42                                                                                  | 11                                                                                  | 63                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 99                                                                                | 832                                                                               | 27                                                                                | 19                                                                                | 1195                                                                              | 0                                                                                 | 9                                                                                   | 13                                                                                  | 0                                                                                   | 0                                                                                   | 53                                                                                  | 63                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

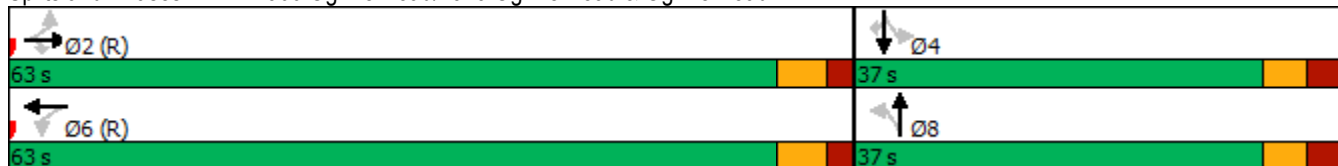
# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

BG 2037 AM

|                                                                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                                                              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type                                                               | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases                                                        | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases                                                        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   |                                                                                   | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase                                                          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 6                                                                                 | 6                                                                                 |                                                                                   | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)                                                     | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              |                                                                                   | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)                                                       | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              |                                                                                   | 36.7                                                                               | 36.7                                                                                |                                                                                     | 36.7                                                                                | 36.7                                                                                | 36.7                                                                                |
| Total Split (s)                                                         | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              |                                                                                   | 37.0                                                                               | 37.0                                                                                |                                                                                     | 37.0                                                                                | 37.0                                                                                | 37.0                                                                                |
| Total Split (%)                                                         | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             |                                                                                   | 37.0%                                                                              | 37.0%                                                                               |                                                                                     | 37.0%                                                                               | 37.0%                                                                               | 37.0%                                                                               |
| Maximum Green (s)                                                       | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              |                                                                                   | 30.3                                                                               | 30.3                                                                                |                                                                                     | 30.3                                                                                | 30.3                                                                                | 30.3                                                                                |
| Yellow Time (s)                                                         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.3                                                                                | 3.3                                                                                 |                                                                                     | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 |
| All-Red Time (s)                                                        | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               |                                                                                   | 3.4                                                                                | 3.4                                                                                 |                                                                                     | 3.4                                                                                 | 3.4                                                                                 | 3.4                                                                                 |
| Lost Time Adjust (s)                                                    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)                                                     | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               |                                                                                   | 6.7                                                                                | 6.7                                                                                 |                                                                                     |                                                                                     | 6.7                                                                                 | 6.7                                                                                 |
| Lead/Lag                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)                                                   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             |                                                                                   | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)                                                           | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |
| Flash Dont Walk (s)                                                     | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              |                                                                                   | 23.0                                                                               | 23.0                                                                                |                                                                                     | 23.0                                                                                | 23.0                                                                                | 23.0                                                                                |
| Pedestrian Calls (#/hr)                                                 | 10                                                                                | 10                                                                                | 10                                                                                | 10                                                                                | 10                                                                                |                                                                                   | 30                                                                                 | 30                                                                                  |                                                                                     | 30                                                                                  | 30                                                                                  | 30                                                                                  |
| Act Effct Green (s)                                                     | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              |                                                                                   | 22.0                                                                               | 22.0                                                                                |                                                                                     |                                                                                     | 22.0                                                                                | 22.0                                                                                |
| Actuated g/C Ratio                                                      | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              |                                                                                   | 0.22                                                                               | 0.22                                                                                |                                                                                     |                                                                                     | 0.22                                                                                | 0.22                                                                                |
| v/c Ratio                                                               | 0.41                                                                              | 0.35                                                                              | 0.03                                                                              | 0.05                                                                              | 0.51                                                                              |                                                                                   | 0.03                                                                               | 0.04                                                                                |                                                                                     |                                                                                     | 0.18                                                                                | 0.17                                                                                |
| Control Delay                                                           | 17.1                                                                              | 8.5                                                                               | 1.6                                                                               | 5.7                                                                               | 5.5                                                                               |                                                                                   | 25.2                                                                               | 13.3                                                                                |                                                                                     |                                                                                     | 29.3                                                                                | 8.5                                                                                 |
| Queue Delay                                                             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay                                                             | 17.1                                                                              | 8.5                                                                               | 1.6                                                                               | 5.7                                                                               | 5.5                                                                               |                                                                                   | 25.2                                                                               | 13.3                                                                                |                                                                                     |                                                                                     | 29.3                                                                                | 8.5                                                                                 |
| LOS                                                                     | B                                                                                 | A                                                                                 | A                                                                                 | A                                                                                 | A                                                                                 |                                                                                   | C                                                                                  | B                                                                                   |                                                                                     |                                                                                     | C                                                                                   | A                                                                                   |
| Approach Delay                                                          | 9.2                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 5.5                                                                               | 18.2                                                                               |                                                                                     | 18.0                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Approach LOS                                                            | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | A                                                                                 | B                                                                                  |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type: Other                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Cycle Length: 100                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length: 100                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Offset: 12 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Natural Cycle: 80                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type: Actuated-Coordinated                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Maximum v/c Ratio: 0.51                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Signal Delay: 7.8                                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection LOS: A                                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization 94.4%                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| ICU Level of Service F                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min) 15                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Splits and Phases: 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road



1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

BG 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 156                                                                               | 598                                                                               | 88                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 86                                                                                  | 38                                                                                  | 13                                                                                  | 119                                                                                 | 27                                                                                  | 178                                                                                 |
| Future Volume (vph)        | 156                                                                               | 598                                                                               | 88                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 86                                                                                  | 38                                                                                  | 13                                                                                  | 119                                                                                 | 27                                                                                  | 178                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 40.0                                                                              | 45.0                                                                              |                                                                                   | 70.0                                                                              | 30.0                                                                                |                                                                                     | 0.0                                                                                 | 20.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                                |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.99                                                                              |                                                                                   | 0.92                                                                              | 0.98                                                                              |                                                                                   | 0.89                                                                              | 0.99                                                                                | 0.99                                                                                |                                                                                     | 0.98                                                                                | 0.98                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     | 0.962                                                                               |                                                                                     |                                                                                     | 0.870                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1631                                                                                | 1637                                                                                | 0                                                                                   | 1647                                                                                | 1474                                                                                | 0                                                                                   |
| Flt Permitted              | 0.179                                                                             |                                                                                   |                                                                                   | 0.426                                                                             |                                                                                   |                                                                                   | 0.629                                                                               |                                                                                     |                                                                                     | 0.603                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 312                                                                               | 3357                                                                              | 1389                                                                              | 737                                                                               | 3357                                                                              | 1340                                                                              | 1069                                                                                | 1637                                                                                | 0                                                                                   | 1023                                                                                | 1474                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 121                                                                               |                                                                                   |                                                                                   | 161                                                                               |                                                                                     | 13                                                                                  |                                                                                     |                                                                                     | 178                                                                                 |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                     | 345.6                                                                               |                                                                                     |                                                                                     | 177.6                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                     | 20.7                                                                                |                                                                                     |                                                                                     | 10.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 43                                                                                |                                                                                   | 27                                                                                | 27                                                                                |                                                                                   | 43                                                                                | 14                                                                                  |                                                                                     | 23                                                                                  | 23                                                                                  |                                                                                     | 14                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 156                                                                               | 598                                                                               | 88                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 86                                                                                  | 38                                                                                  | 13                                                                                  | 119                                                                                 | 27                                                                                  | 178                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 156                                                                               | 598                                                                               | 88                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 86                                                                                  | 51                                                                                  | 0                                                                                   | 119                                                                                 | 205                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

Synchro 11 Report  
04/04/2023

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

BG 2037 AM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | pm+pt                                                                             | NA                                                                                | Perm                                                                              | pm+pt                                                                             | NA                                                                                | Perm                                                                              | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 37.4                                                                               | 37.4                                                                                |                                                                                     | 37.4                                                                                | 37.4                                                                                |                                                                                     |
| Total Split (s)         | 15.0                                                                              | 42.0                                                                              | 42.0                                                                              | 15.0                                                                              | 42.0                                                                              | 42.0                                                                              | 38.0                                                                               | 38.0                                                                                |                                                                                     | 38.0                                                                                | 38.0                                                                                |                                                                                     |
| Total Split (%)         | 15.0%                                                                             | 42.0%                                                                             | 42.0%                                                                             | 15.0%                                                                             | 42.0%                                                                             | 42.0%                                                                             | 38.0%                                                                              | 38.0%                                                                               |                                                                                     | 38.0%                                                                               | 38.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 10.3                                                                              | 36.0                                                                              | 36.0                                                                              | 10.3                                                                              | 36.0                                                                              | 36.0                                                                              | 30.6                                                                               | 30.6                                                                                |                                                                                     | 30.6                                                                                | 30.6                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 4.4                                                                                | 4.4                                                                                 |                                                                                     | 4.4                                                                                 | 4.4                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 7.4                                                                                | 7.4                                                                                 |                                                                                     | 7.4                                                                                 | 7.4                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                | Lag                                                                                 |                                                                                     | Lag                                                                                 | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              | 28.0                                                                               | 28.0                                                                                |                                                                                     | 28.0                                                                                | 28.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 15                                                                                | 15                                                                                |                                                                                   | 15                                                                                | 15                                                                                | 15                                                                                 | 15                                                                                  |                                                                                     | 15                                                                                  | 15                                                                                  |                                                                                     |
| Act Effect Green (s)    | 63.3                                                                              | 59.9                                                                              | 59.9                                                                              | 55.7                                                                              | 48.5                                                                              | 48.5                                                                              | 19.5                                                                               | 19.5                                                                                |                                                                                     | 19.5                                                                                | 19.5                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.63                                                                              | 0.60                                                                              | 0.60                                                                              | 0.56                                                                              | 0.48                                                                              | 0.48                                                                              | 0.20                                                                               | 0.20                                                                                |                                                                                     | 0.20                                                                                | 0.20                                                                                |                                                                                     |
| v/c Ratio               | 0.49                                                                              | 0.30                                                                              | 0.10                                                                              | 0.03                                                                              | 0.60                                                                              | 0.22                                                                              | 0.42                                                                               | 0.16                                                                                |                                                                                     | 0.60                                                                                | 0.48                                                                                |                                                                                     |
| Control Delay           | 25.7                                                                              | 21.4                                                                              | 10.1                                                                              | 6.1                                                                               | 12.4                                                                              | 1.2                                                                               | 38.5                                                                               | 24.0                                                                                |                                                                                     | 47.2                                                                                | 10.2                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 25.7                                                                              | 21.4                                                                              | 10.1                                                                              | 6.1                                                                               | 12.4                                                                              | 1.2                                                                               | 38.5                                                                               | 24.0                                                                                |                                                                                     | 47.2                                                                                | 10.2                                                                                |                                                                                     |
| LOS                     | C                                                                                 | C                                                                                 | B                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | D                                                                                  | C                                                                                   |                                                                                     | D                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 21.0                                                                              |                                                                                   |                                                                                   | 10.8                                                                              |                                                                                   |                                                                                    | 33.1                                                                                |                                                                                     |                                                                                     | 23.8                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 29 (29%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 17.2

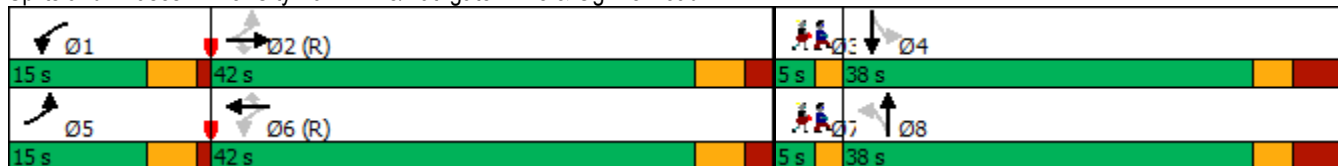
Intersection LOS: B

Intersection Capacity Utilization 85.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: City Park Drive/Bathgate Drive & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | Ped  | Ped  |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 15   | 15   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

1900/2000 City Park Drive  
18: Residential/Cadboro Road & Ogilvie Road

BG 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                     |                                                                                     |  |                                                                                     |                                                                                     |  |
| Traffic Volume (vph)       | 0                                                                                 | 1216                                                                              | 9                                                                                 | 0                                                                                 | 1271                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Future Volume (vph)        | 0                                                                                 | 1216                                                                              | 9                                                                                 | 0                                                                                 | 1271                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Fr't                       |                                                                                   | 0.999                                                                             |                                                                                   |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     | 0.865                                                                               |
| Flt Protected              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3370                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3370                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   | 7                                                                                 |                                                                                   |                                                                                     |                                                                                     | 53                                                                                  |                                                                                     |                                                                                     | 46                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                     | 90.1                                                                                |                                                                                     |                                                                                     | 116.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj. Flow (vph)            | 0                                                                                 | 1216                                                                              | 9                                                                                 | 0                                                                                 | 1271                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 1225                                                                              | 0                                                                                 | 0                                                                                 | 1328                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                     | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Detector Template          |                                                                                   | Thru                                                                              |                                                                                   |                                                                                   | Thru                                                                              |                                                                                   |                                                                                     |                                                                                     | Right                                                                               |                                                                                     |                                                                                     | Right                                                                               |
| Leading Detector (m)       |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Trailing Detector (m)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Position(m)     |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Detector 1 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Queue (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Delay (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type                  |                                                                                   | NA                                                                                |                                                                                   |                                                                                   | NA                                                                                |                                                                                   |                                                                                     |                                                                                     | Perm                                                                                |                                                                                     |                                                                                     | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Permitted Phases           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Detector Phase             |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |

1900/2000 City Park Drive  
18: Residential/Cadboro Road & Ogilvie Road

BG 2037 AM

|                         |  |       |     |     |       |     |     |     |       |     |     |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-----|-------|-----|-----|-----|-------|-----|-----|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL | WBT   | WBR | NBL | NBT | NBR   | SBL | SBT | SBR   |
| Minimum Split (s)       |                                                                                    | 35.0  |     |     | 35.0  |     |     |     | 40.0  |     |     | 40.0  |
| Total Split (s)         |                                                                                    | 60.0  |     |     | 60.0  |     |     |     | 40.0  |     |     | 40.0  |
| Total Split (%)         |                                                                                    | 60.0% |     |     | 60.0% |     |     |     | 40.0% |     |     | 40.0% |
| Maximum Green (s)       |                                                                                    | 54.0  |     |     | 54.0  |     |     |     | 36.0  |     |     | 36.0  |
| Yellow Time (s)         |                                                                                    | 3.7   |     |     | 3.7   |     |     |     | 3.0   |     |     | 3.0   |
| All-Red Time (s)        |                                                                                    | 2.3   |     |     | 2.3   |     |     |     | 1.0   |     |     | 1.0   |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |     | 0.0   |
| Total Lost Time (s)     |                                                                                    | 6.0   |     |     | 6.0   |     |     |     | 4.0   |     |     | 4.0   |
| Lead/Lag                |                                                                                    |       |     |     |       |     |     |     |       |     |     |       |
| Lead-Lag Optimize?      |                                                                                    |       |     |     |       |     |     |     |       |     |     |       |
| Vehicle Extension (s)   |                                                                                    | 3.0   |     |     | 3.0   |     |     |     | 3.0   |     |     | 3.0   |
| Recall Mode             |                                                                                    | C-Max |     |     | C-Max |     |     |     | None  |     |     | None  |
| Walk Time (s)           |                                                                                    | 15.0  |     |     | 15.0  |     |     |     | 24.0  |     |     | 24.0  |
| Flash Dont Walk (s)     |                                                                                    | 14.0  |     |     | 14.0  |     |     |     | 12.0  |     |     | 12.0  |
| Pedestrian Calls (#/hr) |                                                                                    | 20    |     |     | 20    |     |     |     | 15    |     |     | 15    |
| Act Effct Green (s)     |                                                                                    | 78.5  |     |     | 78.5  |     |     |     | 17.7  |     |     | 17.7  |
| Actuated g/C Ratio      |                                                                                    | 0.78  |     |     | 0.78  |     |     |     | 0.18  |     |     | 0.18  |
| v/c Ratio               |                                                                                    | 0.46  |     |     | 0.50  |     |     |     | 0.02  |     |     | 0.07  |
| Control Delay           |                                                                                    | 7.0   |     |     | 4.4   |     |     |     | 0.2   |     |     | 2.1   |
| Queue Delay             |                                                                                    | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |     | 0.0   |
| Total Delay             |                                                                                    | 7.0   |     |     | 4.4   |     |     |     | 0.2   |     |     | 2.1   |
| LOS                     |                                                                                    | A     |     |     | A     |     |     |     | A     |     |     | A     |
| Approach Delay          |                                                                                    | 7.0   |     |     | 4.4   |     |     | 0.2 |       |     | 2.1 |       |
| Approach LOS            |                                                                                    | A     |     |     | A     |     |     | A   |       |     | A   |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 42 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 5.6

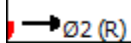
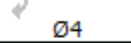
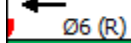
Intersection LOS: A

Intersection Capacity Utilization 51.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 18: Residential/Cadboro Road & Ogilvie Road

|                                                                                                              |                                                                                                           |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <br><b>Ø2 (R)</b><br>60 s | <br><b>Ø4</b><br>40 s |
| <br><b>Ø6 (R)</b><br>60 s | <br><b>Ø8</b><br>40 s |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

BG 2037 AM

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |  |                                                                                   |  |
| Traffic Volume (vph)       | 198                                                                               | 1015                                                                              | 925                                                                               | 81                                                                                | 183                                                                               | 485                                                                               |
| Future Volume (vph)        | 198                                                                               | 1015                                                                              | 925                                                                               | 81                                                                                | 183                                                                               | 485                                                                               |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Storage Length (m)         | 0.0                                                                               | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   |
| Storage Lanes              | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.986                                                                             |
| Satd. Flow (prot)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 3217                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.576                                                                             |
| Satd. Flow (perm)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 1879                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 476                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (k/h)           | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)          | 216.4                                                                             |                                                                                   | 230.9                                                                             |                                                                                   |                                                                                   | 341.9                                                                             |
| Travel Time (s)            | 13.0                                                                              |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 20.5                                                                              |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Heavy Vehicles (%)         | 5%                                                                                | 5%                                                                                | 4%                                                                                | 4%                                                                                | 6%                                                                                | 6%                                                                                |
| Adj. Flow (vph)            | 198                                                                               | 1015                                                                              | 925                                                                               | 81                                                                                | 183                                                                               | 485                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 198                                                                               | 1015                                                                              | 925                                                                               | 81                                                                                | 0                                                                                 | 668                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)            | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)             | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)         | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)        | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |
| Leading Detector (m)       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Size(m)         | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 2 Position(m)     |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |
| Detector 2 Size(m)         |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |
| Detector 2 Type            |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Turn Type                  | Prot                                                                              | Free                                                                              | NA                                                                                | pm+ov                                                                             | Perm                                                                              | NA                                                                                |
| Protected Phases           | 8                                                                                 |                                                                                   | 2                                                                                 | 8                                                                                 |                                                                                   | 6                                                                                 |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

BG 2037 AM

| Lane Group              | WBL   | WBR  | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|------|-------|-------|-------|-------|
| Permitted Phases        | Free  |      |       | 2     | 6     |       |
| Detector Phase          | 8     |      | 2     | 8     | 6     | 6     |
| Switch Phase            |       |      |       |       |       |       |
| Minimum Initial (s)     | 5.0   |      | 10.0  | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 25.3  |      | 30.5  | 25.3  | 16.5  | 16.5  |
| Total Split (s)         | 35.0  |      | 55.0  | 35.0  | 55.0  | 55.0  |
| Total Split (%)         | 38.9% |      | 61.1% | 38.9% | 61.1% | 61.1% |
| Maximum Green (s)       | 28.7  |      | 48.5  | 28.7  | 48.5  | 48.5  |
| Yellow Time (s)         | 3.3   |      | 4.2   | 3.3   | 4.2   | 4.2   |
| All-Red Time (s)        | 3.0   |      | 2.3   | 3.0   | 2.3   | 2.3   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   |       | 0.0   |
| Total Lost Time (s)     | 6.3   |      | 6.5   | 6.3   |       | 6.5   |
| Lead/Lag                |       |      |       |       |       |       |
| Lead-Lag Optimize?      |       |      |       |       |       |       |
| Vehicle Extension (s)   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  |      | Max   | None  | Max   | Max   |
| Walk Time (s)           | 7.0   |      | 7.0   | 7.0   |       |       |
| Flash Dont Walk (s)     | 12.0  |      | 17.0  | 12.0  |       |       |
| Pedestrian Calls (#/hr) | 0     |      | 0     | 0     |       |       |
| Act Effect Green (s)    | 14.2  | 75.7 | 48.6  | 75.7  |       | 48.6  |
| Actuated g/C Ratio      | 0.19  | 1.00 | 0.64  | 1.00  |       | 0.64  |
| v/c Ratio               | 0.64  | 0.69 | 0.43  | 0.05  |       | 0.55  |
| Control Delay           | 38.1  | 2.7  | 8.0   | 0.1   |       | 10.5  |
| Queue Delay             | 0.0   | 0.0  | 0.0   | 0.0   |       | 0.0   |
| Total Delay             | 38.1  | 2.7  | 8.0   | 0.1   |       | 10.5  |
| LOS                     | D     | A    | A     | A     |       | B     |
| Approach Delay          | 8.4   |      | 7.4   |       |       | 10.5  |
| Approach LOS            | A     |      | A     |       |       | B     |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 75.7

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 8.6

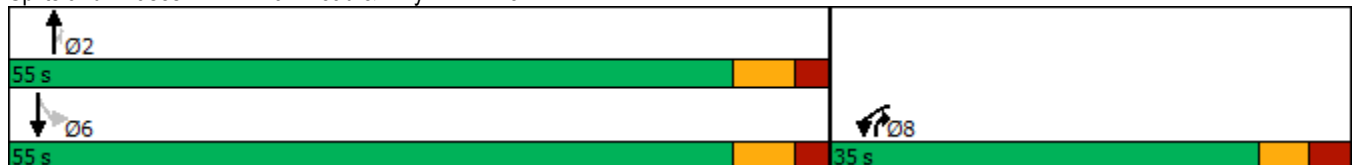
Intersection LOS: A

Intersection Capacity Utilization 74.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 22: Blair Road & Hwy 174 EB off



## 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road &amp; Ogilvie Road

BG 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 83                                                                                | 1085                                                                              | 21                                                                                | 33                                                                                | 1264                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Future Volume (vph)        | 83                                                                                | 1085                                                                              | 21                                                                                | 33                                                                                | 1264                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 70.0                                                                              |                                                                                   | 0.0                                                                               | 15.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 35.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 1.00                                                                              |                                                                                   | 0.99                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.98                                                                                |                                                                                     |                                                                                     | 0.99                                                                                | 0.99                                                                                |
| Frt                        |                                                                                   | 0.997                                                                             |                                                                                   |                                                                                   | 0.998                                                                             |                                                                                   |                                                                                     | 0.861                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.956                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3375                                                                              | 0                                                                                 | 1695                                                                              | 3382                                                                              | 0                                                                                 | 1662                                                                                | 1471                                                                                | 0                                                                                   | 0                                                                                   | 1706                                                                                | 1517                                                                                |
| Flt Permitted              | 0.153                                                                             |                                                                                   |                                                                                   | 0.216                                                                             |                                                                                   |                                                                                   | 0.740                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.727                                                                               |                                                                                     |
| Satd. Flow (perm)          | 273                                                                               | 3375                                                                              | 0                                                                                 | 383                                                                               | 3382                                                                              | 0                                                                                 | 1290                                                                                | 1471                                                                                | 0                                                                                   | 0                                                                                   | 1282                                                                                | 1497                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 1                                                                                 |                                                                                   |                                                                                     | 26                                                                                  |                                                                                     |                                                                                     |                                                                                     | 171                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 314.1                                                                             |                                                                                   |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                     | 176.2                                                                               |                                                                                     |                                                                                     |                                                                                     | 174.1                                                                               |
| Travel Time (s)            |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     |                                                                                     | 10.4                                                                                |
| Confl. Peds. (#/hr)        | 11                                                                                |                                                                                   | 26                                                                                | 26                                                                                |                                                                                   | 11                                                                                | 4                                                                                   |                                                                                     | 14                                                                                  | 14                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 21                                                                                |                                                                                   |                                                                                   | 9                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                  | 4%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 83                                                                                | 1085                                                                              | 21                                                                                | 33                                                                                | 1264                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 83                                                                                | 1106                                                                              | 0                                                                                 | 33                                                                                | 1278                                                                              | 0                                                                                 | 57                                                                                  | 28                                                                                  | 0                                                                                   | 0                                                                                   | 27                                                                                  | 171                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road & Ogilvie Road

BG 2037 AM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                |                                                                                   | Perm                                                                                | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                   | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase          | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   | 8                                                                                   | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              |                                                                                   | 5.0                                                                               | 10.0                                                                              |                                                                                   | 10.0                                                                                | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 9.7                                                                               | 33.6                                                                              |                                                                                   | 9.7                                                                               | 33.6                                                                              |                                                                                   | 40.2                                                                                | 40.2                                                                                |                                                                                     | 40.2                                                                                | 40.2                                                                                | 40.2                                                                                |
| Total Split (s)         | 13.0                                                                              | 47.0                                                                              |                                                                                   | 13.0                                                                              | 47.0                                                                              |                                                                                   | 40.0                                                                                | 40.0                                                                                |                                                                                     | 40.0                                                                                | 40.0                                                                                | 40.0                                                                                |
| Total Split (%)         | 13.0%                                                                             | 47.0%                                                                             |                                                                                   | 13.0%                                                                             | 47.0%                                                                             |                                                                                   | 40.0%                                                                               | 40.0%                                                                               |                                                                                     | 40.0%                                                                               | 40.0%                                                                               | 40.0%                                                                               |
| Maximum Green (s)       | 8.3                                                                               | 41.4                                                                              |                                                                                   | 8.3                                                                               | 41.4                                                                              |                                                                                   | 32.8                                                                                | 32.8                                                                                |                                                                                     | 32.8                                                                                | 32.8                                                                                | 32.8                                                                                |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| All-Red Time (s)        | 1.0                                                                               | 1.9                                                                               |                                                                                   | 1.0                                                                               | 1.9                                                                               |                                                                                   | 4.2                                                                                 | 4.2                                                                                 |                                                                                     | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 4.7                                                                               | 5.6                                                                               |                                                                                   | 4.7                                                                               | 5.6                                                                               |                                                                                   | 7.2                                                                                 | 7.2                                                                                 |                                                                                     |                                                                                     | 7.2                                                                                 | 7.2                                                                                 |
| Lead/Lag                | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                              | Lag                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               |                                                                                   | Yes                                                                               | Yes                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              | C-Max                                                                             |                                                                                   | None                                                                              | C-Max                                                                             |                                                                                   | None                                                                                | None                                                                                |                                                                                     | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   | 7.0                                                                                 | 7.0                                                                                 |                                                                                     | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |
| Flash Dont Walk (s)     |                                                                                   | 13.0                                                                              |                                                                                   |                                                                                   | 13.0                                                                              |                                                                                   | 26.0                                                                                | 26.0                                                                                |                                                                                     | 26.0                                                                                | 26.0                                                                                | 26.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   | 10                                                                                |                                                                                   |                                                                                   | 10                                                                                |                                                                                   | 10                                                                                  | 10                                                                                  |                                                                                     | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Act Effect Green (s)    | 70.9                                                                              | 65.6                                                                              |                                                                                   | 68.9                                                                              | 62.9                                                                              |                                                                                   | 14.9                                                                                | 14.9                                                                                |                                                                                     |                                                                                     | 14.9                                                                                | 14.9                                                                                |
| Actuated g/C Ratio      | 0.71                                                                              | 0.66                                                                              |                                                                                   | 0.69                                                                              | 0.63                                                                              |                                                                                   | 0.15                                                                                | 0.15                                                                                |                                                                                     |                                                                                     | 0.15                                                                                | 0.15                                                                                |
| v/c Ratio               | 0.29                                                                              | 0.50                                                                              |                                                                                   | 0.10                                                                              | 0.60                                                                              |                                                                                   | 0.30                                                                                | 0.12                                                                                |                                                                                     |                                                                                     | 0.14                                                                                | 0.46                                                                                |
| Control Delay           | 8.3                                                                               | 12.7                                                                              |                                                                                   | 4.6                                                                               | 7.9                                                                               |                                                                                   | 38.9                                                                                | 13.0                                                                                |                                                                                     |                                                                                     | 34.7                                                                                | 9.0                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 8.3                                                                               | 12.7                                                                              |                                                                                   | 4.6                                                                               | 7.9                                                                               |                                                                                   | 38.9                                                                                | 13.0                                                                                |                                                                                     |                                                                                     | 34.7                                                                                | 9.0                                                                                 |
| LOS                     | A                                                                                 | B                                                                                 |                                                                                   | A                                                                                 | A                                                                                 |                                                                                   | D                                                                                   | B                                                                                   |                                                                                     |                                                                                     | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 12.4                                                                              |                                                                                   |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                     | 30.4                                                                                |                                                                                     |                                                                                     | 12.5                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                     | C                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 54 (54%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 10.8

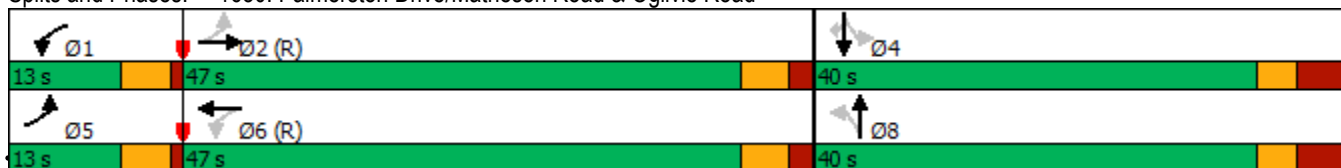
Intersection LOS: B

Intersection Capacity Utilization 80.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1630: Palmerston Drive/Matheson Road & Ogilvie Road



Synchro 11 Report

04/04/2023

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

BG 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 150                                                                               | 850                                                                               | 627                                                                               | 875                                                                               | 492                                                                               | 83                                                                                | 218                                                                                | 296                                                                                 | 923                                                                                 | 75                                                                                  | 761                                                                                 | 55                                                                                  |
| Future Volume (vph)        | 150                                                                               | 850                                                                               | 627                                                                               | 875                                                                               | 492                                                                               | 83                                                                                | 218                                                                                | 296                                                                                 | 923                                                                                 | 75                                                                                  | 761                                                                                 | 55                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 110.0                                                                             |                                                                                   | 0.0                                                                               | 120.0                                                                              |                                                                                     | 0.0                                                                                 | 30.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 0                                                                                 | 2                                                                                  |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 40.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                               |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.97                                                                              | 0.95                                                                              | 0.95                                                                              | 0.97                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.99                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.978                                                                             |                                                                                   |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     | 0.990                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3244                                                                              | 0                                                                                 | 3257                                                                               | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3294                                                                                | 0                                                                                   |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3244                                                                              | 0                                                                                 | 3257                                                                               | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3294                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 223                                                                               |                                                                                   | 15                                                                                |                                                                                   |                                                                                    |                                                                                     | 443                                                                                 |                                                                                     | 5                                                                                   |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                   | 396.5                                                                             |                                                                                   |                                                                                    | 239.9                                                                               |                                                                                     |                                                                                     | 411.0                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                   | 23.8                                                                              |                                                                                   |                                                                                    | 14.4                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 29                                                                                |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 84                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                 | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 150                                                                               | 850                                                                               | 627                                                                               | 875                                                                               | 492                                                                               | 83                                                                                | 218                                                                                | 296                                                                                 | 923                                                                                 | 75                                                                                  | 761                                                                                 | 55                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 150                                                                               | 850                                                                               | 627                                                                               | 875                                                                               | 575                                                                               | 0                                                                                 | 218                                                                                | 296                                                                                 | 923                                                                                 | 75                                                                                  | 816                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                    | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                  | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

BG 2037 PM

|                         |  |       |       |       |       |     |       |       |       |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    |     | Prot  | NA    | Perm  | Prot  | NA    |     |
| Protected Phases        | 5                                                                                  | 2     |       | 1     | 6     |     | 3     | 8     |       | 7     | 4     |     |
| Permitted Phases        |                                                                                    |       | 2     |       |       |     |       |       | 8     |       |       |     |
| Detector Phase          | 5                                                                                  | 2     | 2     | 1     | 6     |     | 3     | 8     | 8     | 7     | 4     |     |
| Switch Phase            |                                                                                    |       |       |       |       |     |       |       |       |       |       |     |
| Minimum Initial (s)     | 5.0                                                                                | 10.0  | 10.0  | 5.0   | 10.0  |     | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  |     |
| Minimum Split (s)       | 11.8                                                                               | 38.6  | 38.6  | 11.8  | 38.6  |     | 11.5  | 35.5  | 35.5  | 11.5  | 35.5  |     |
| Total Split (s)         | 25.0                                                                               | 41.0  | 41.0  | 37.0  | 53.0  |     | 21.0  | 41.0  | 41.0  | 21.0  | 41.0  |     |
| Total Split (%)         | 17.9%                                                                              | 29.3% | 29.3% | 26.4% | 37.9% |     | 15.0% | 29.3% | 29.3% | 15.0% | 29.3% |     |
| Maximum Green (s)       | 18.2                                                                               | 34.4  | 34.4  | 30.2  | 46.4  |     | 14.5  | 34.5  | 34.5  | 14.5  | 34.5  |     |
| Yellow Time (s)         | 3.7                                                                                | 3.3   | 3.3   | 3.7   | 3.3   |     | 4.2   | 4.2   | 4.2   | 4.2   | 4.2   |     |
| All-Red Time (s)        | 3.1                                                                                | 3.3   | 3.3   | 3.1   | 3.3   |     | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   |     |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 6.8                                                                                | 6.6   | 6.6   | 6.8   | 6.6   |     | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |     |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   |     | Lead  | Lag   | Lag   | Lead  | Lag   |     |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   |     | Yes   | Yes   | Yes   | Yes   | Yes   |     |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |
| Recall Mode             | None                                                                               | C-Max | C-Max | None  | C-Max |     | None  | None  | None  | None  | None  |     |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   |     |       | 7.0   | 7.0   |       | 7.0   |     |
| Flash Dont Walk (s)     |                                                                                    | 25.0  | 25.0  |       | 25.0  |     |       | 22.0  | 22.0  |       | 22.0  |     |
| Pedestrian Calls (#/hr) |                                                                                    | 30    | 30    |       | 30    |     |       | 35    | 35    |       | 35    |     |
| Act Effect Green (s)    | 16.2                                                                               | 34.4  | 34.4  | 30.2  | 48.4  |     | 13.4  | 37.7  | 37.7  | 11.3  | 35.6  |     |
| Actuated g/C Ratio      | 0.12                                                                               | 0.25  | 0.25  | 0.22  | 0.35  |     | 0.10  | 0.27  | 0.27  | 0.08  | 0.25  |     |
| v/c Ratio               | 0.77                                                                               | 1.03  | 1.17  | 1.25  | 0.51  |     | 0.70  | 0.62  | 1.27  | 0.56  | 0.97  |     |
| Control Delay           | 85.3                                                                               | 90.8  | 124.0 | 167.4 | 37.7  |     | 73.6  | 52.3  | 153.8 | 77.1  | 76.0  |     |
| Queue Delay             | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay             | 85.3                                                                               | 90.8  | 124.0 | 167.4 | 37.7  |     | 73.6  | 52.3  | 153.8 | 77.1  | 76.0  |     |
| LOS                     | F                                                                                  | F     | F     | F     | D     |     | E     | D     | F     | E     | E     |     |
| Approach Delay          |                                                                                    | 103.1 |       |       | 116.0 |     |       | 120.7 |       |       | 76.1  |     |
| Approach LOS            |                                                                                    | F     |       |       | F     |     |       | F     |       |       | E     |     |

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.27

Intersection Signal Delay: 106.8

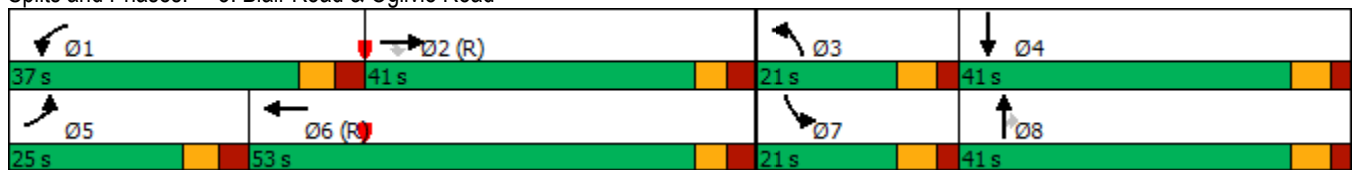
Intersection LOS: F

Intersection Capacity Utilization 108.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 3: Blair Road & Ogilvie Road



1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

BG 2037 PM

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |                                                                                   |  |  |  |  |  |  |  |                                                                                     |  |  |
| Traffic Volume (vph)       | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 177                                                                               | 346                                                                                 | 1306                                                                                | 0                                                                                   | 0                                                                                   | 1802                                                                                | 172                                                                                 |
| Future Volume (vph)        | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 177                                                                               | 346                                                                                 | 1306                                                                                | 0                                                                                   | 0                                                                                   | 1802                                                                                | 172                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   | 70.0                                                                              | 60.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 50.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                   | 100.0                                                                               |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.97                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.91                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1544                                                                              | 0                                                                                 | 1381                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4871                                                                                | 1517                                                                                |
| Flt Permitted              | 0.582                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 946                                                                               | 0                                                                                 | 1381                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4871                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 26                                                                                |                                                                                   |                                                                                   | 84                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 97                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 518.9                                                                             |                                                                                   |                                                                                   | 416.4                                                                             |                                                                                   |                                                                                     | 90.2                                                                                |                                                                                     |                                                                                     | 239.9                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 31.1                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 14.4                                                                                |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 12%                                                                               | 12%                                                                               | 12%                                                                               | 2%                                                                                | 2%                                                                                | 2%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 177                                                                               | 346                                                                                 | 1306                                                                                | 0                                                                                   | 0                                                                                   | 1802                                                                                | 172                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 177                                                                               | 346                                                                                 | 1306                                                                                | 0                                                                                   | 0                                                                                   | 1802                                                                                | 172                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              |                                                                                   | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     |                                                                                     | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     |                                                                                     | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              |                                                                                   | pm+ov                                                                             | Perm                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                                | NA                                                                                  |                                                                                     |                                                                                     | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   | 8                                                                                 |                                                                                   | 5                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |

1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

BG 2037 PM

| Lane Group              | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL | SBT   | SBR   |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Permitted Phases        | 4     |      | 4     | 8     |       | 8     |       |       |     |     |       | 6     |
| Detector Phase          | 4     |      | 5     | 8     | 8     | 8     | 5     | 2     |     |     | 6     | 6     |
| Switch Phase            |       |      |       |       |       |       |       |       |     |     |       |       |
| Minimum Initial (s)     | 10.0  |      | 5.0   | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  |     |     | 10.0  | 10.0  |
| Minimum Split (s)       | 16.8  |      | 11.4  | 36.8  | 36.8  | 36.8  | 11.4  | 30.1  |     |     | 30.1  | 30.1  |
| Total Split (s)         | 36.0  |      | 31.0  | 36.0  | 36.0  | 36.0  | 31.0  | 94.0  |     |     | 63.0  | 63.0  |
| Total Split (%)         | 27.7% |      | 23.8% | 27.7% | 27.7% | 27.7% | 23.8% | 72.3% |     |     | 48.5% | 48.5% |
| Maximum Green (s)       | 29.2  |      | 24.6  | 29.2  | 29.2  | 29.2  | 24.6  | 87.9  |     |     | 56.9  | 56.9  |
| Yellow Time (s)         | 3.3   |      | 4.2   | 3.3   | 3.3   | 3.3   | 4.2   | 4.2   |     |     | 4.2   | 4.2   |
| All-Red Time (s)        | 3.5   |      | 2.2   | 3.5   | 3.5   | 3.5   | 2.2   | 1.9   |     |     | 1.9   | 1.9   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.8   |      | 6.4   | 6.8   | 6.8   | 6.8   | 6.4   | 6.1   |     |     | 6.1   | 6.1   |
| Lead/Lag                |       |      | Lead  |       |       |       | Lead  |       |     |     | Lag   | Lag   |
| Lead-Lag Optimize?      |       |      | Yes   |       |       |       | Yes   |       |     |     | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |     | 3.0   | 3.0   |
| Recall Mode             | None  |      | None  | None  | None  | None  | None  | C-Max |     |     | C-Max | C-Max |
| Walk Time (s)           |       |      |       | 7.0   | 7.0   | 7.0   |       | 7.0   |     |     | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |      |       | 23.0  | 23.0  | 23.0  |       | 17.0  |     |     | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |       |      |       | 20    | 20    | 20    |       | 30    |     |     | 30    | 30    |
| Act Effct Green (s)     | 23.3  |      | 58.6  | 23.3  | 23.3  | 23.3  | 28.5  | 93.8  |     |     | 58.9  | 58.9  |
| Actuated g/C Ratio      | 0.18  |      | 0.45  | 0.18  | 0.18  | 0.18  | 0.22  | 0.72  |     |     | 0.45  | 0.45  |
| v/c Ratio               | 0.73  |      | 0.89  | 0.31  | 0.47  | 0.52  | 0.50  | 0.56  |     |     | 0.82  | 0.23  |
| Control Delay           | 72.8  |      | 48.9  | 46.8  | 51.0  | 28.9  | 48.4  | 10.5  |     |     | 35.2  | 10.8  |
| Queue Delay             | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Delay             | 72.8  |      | 48.9  | 46.8  | 51.0  | 28.9  | 48.4  | 10.5  |     |     | 35.2  | 10.8  |
| LOS                     | E     |      | D     | D     | D     | C     | D     | B     |     |     | D     | B     |
| Approach Delay          |       | 53.1 |       |       | 40.8  |       |       | 18.4  |     |     | 33.1  |       |
| Approach LOS            |       | D    |       |       | D     |       |       | B     |     |     | C     |       |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 50 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 31.6

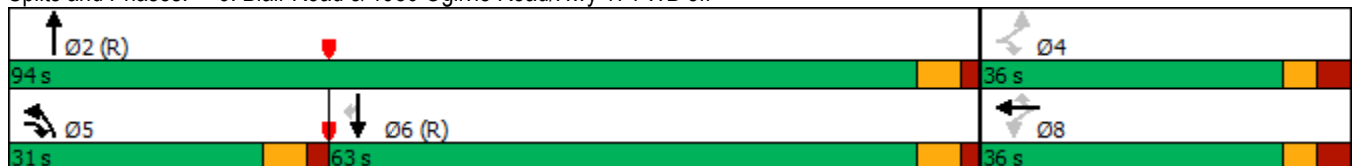
Intersection LOS: C

Intersection Capacity Utilization 98.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off



1900/2000 City Park Drive

9: City Park Drive/1941 Ogilvie & Ogilvie Road

BG 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                    |  |  |  |  |  |
| Traffic Volume (vph)       | 32                                                                                | 1484                                                                              | 152                                                                               | 103                                                                               | 603                                                                               | 38                                                                                | 183                                                                                | 10                                                                                  | 161                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Future Volume (vph)        | 32                                                                                | 1484                                                                              | 152                                                                               | 103                                                                               | 603                                                                               | 38                                                                                | 183                                                                                | 10                                                                                  | 161                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                  |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.89                                                                              |                                                                                   | 0.87                                                                              |                                                                                   |                                                                                   | 0.73                                                                              |                                                                                    | 0.93                                                                                | 0.87                                                                                | 0.91                                                                                |                                                                                     | 0.92                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.955                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                  | 1609                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.424                                                                             |                                                                                   |                                                                                   | 0.074                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.723                                                                               |                                                                                     | 0.558                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 675                                                                               | 3390                                                                              | 1315                                                                              | 131                                                                               | 3357                                                                              | 1104                                                                              | 0                                                                                  | 1135                                                                                | 1244                                                                                | 906                                                                                 | 1784                                                                                | 1388                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 152                                                                               |                                                                                   |                                                                                   | 60                                                                                |                                                                                    |                                                                                     | 161                                                                                 |                                                                                     |                                                                                     | 99                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                    | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                    | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 145                                                                               |                                                                                   | 67                                                                                | 67                                                                                |                                                                                   | 145                                                                               | 67                                                                                 |                                                                                     | 110                                                                                 | 110                                                                                 |                                                                                     | 67                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                 | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 32                                                                                | 1484                                                                              | 152                                                                               | 103                                                                               | 603                                                                               | 38                                                                                | 183                                                                                | 10                                                                                  | 161                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 32                                                                                | 1484                                                                              | 152                                                                               | 103                                                                               | 603                                                                               | 38                                                                                | 0                                                                                  | 193                                                                                 | 161                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie & Ogilvie Road

BG 2037 PM

|                         | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Turn Type               | Perm  | NA    | Perm  | pm+pt | NA    | Perm  | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases        |       | 2     |       | 1     | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases        | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 1     | 6     | 6     | 8     | 8     | 8     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 35.1  | 35.1  | 35.1  | 9.0   | 35.1  | 35.1  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  |
| Total Split (s)         | 46.0  | 46.0  | 46.0  | 15.0  | 61.0  | 61.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)         | 46.0% | 46.0% | 46.0% | 15.0% | 61.0% | 61.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% |
| Maximum Green (s)       | 39.9  | 39.9  | 39.9  | 11.0  | 54.9  | 54.9  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.0   | 3.7   | 3.7   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.4   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.1   | 6.1   | 6.1   | 4.0   | 6.1   | 6.1   |       | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lead  |       |       | Lag   | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Flash Dont Walk (s)     | 22.0  | 22.0  | 22.0  |       | 22.0  | 22.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) | 35    | 35    | 35    |       | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    |
| Act Effct Green (s)     | 51.6  | 51.6  | 51.6  | 63.9  | 61.8  | 61.8  |       | 22.6  | 22.6  | 22.6  | 22.6  | 22.6  |
| Actuated g/C Ratio      | 0.52  | 0.52  | 0.52  | 0.64  | 0.62  | 0.62  |       | 0.23  | 0.23  | 0.23  | 0.23  | 0.23  |
| v/c Ratio               | 0.09  | 0.85  | 0.20  | 0.49  | 0.29  | 0.05  |       | 0.75  | 0.40  | 0.38  | 0.05  | 0.19  |
| Control Delay           | 9.1   | 20.7  | 1.0   | 20.3  | 10.6  | 1.4   |       | 53.9  | 7.8   | 36.6  | 27.6  | 4.5   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 9.1   | 20.7  | 1.0   | 20.3  | 10.6  | 1.4   |       | 53.9  | 7.8   | 36.6  | 27.6  | 4.5   |
| LOS                     | A     | C     | A     | C     | B     | A     |       | D     | A     | D     | C     | A     |
| Approach Delay          |       | 18.7  |       |       | 11.5  |       |       | 32.9  |       |       | 21.5  |       |
| Approach LOS            |       | B     |       |       | B     |       |       | C     |       |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 30 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 18.8

Intersection LOS: B

Intersection Capacity Utilization 102.6%

ICU Level of Service G

Analysis Period (min) 15

### Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

BG 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                 | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Future Volume (vph)        | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                 | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 60.0                                                                              |                                                                                   | 80.0                                                                              | 90.0                                                                              |                                                                                   | 0.0                                                                               | 0.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                  |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 20.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                    | 0.865                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     |                                                                                     | 0.953                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3345                                                                              | 0                                                                                 | 1695                                                                               | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1700                                                                                | 1517                                                                                |
| Flt Permitted              | 0.289                                                                             |                                                                                   |                                                                                   | 0.131                                                                             |                                                                                   |                                                                                   | 0.669                                                                              |                                                                                     |                                                                                     |                                                                                     | 0.708                                                                               |                                                                                     |
| Satd. Flow (perm)          | 516                                                                               | 3390                                                                              | 1517                                                                              | 231                                                                               | 3345                                                                              | 0                                                                                 | 1194                                                                               | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1263                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 66                                                                                |                                                                                   | 5                                                                                 |                                                                                   |                                                                                    | 28                                                                                  |                                                                                     |                                                                                     |                                                                                     | 132                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                    | 86.0                                                                                |                                                                                     |                                                                                     | 56.6                                                                                |                                                                                     |
| Travel Time (s)            |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                    | 5.2                                                                                 |                                                                                     |                                                                                     | 3.4                                                                                 |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 2%                                                                                | 2%                                                                                 | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                 | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 885                                                                               | 0                                                                                 | 47                                                                                 | 31                                                                                  | 0                                                                                   | 0                                                                                   | 138                                                                                 | 132                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                  | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |

# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

BG 2037 PM

|                         | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Permitted Phases        | 2     |       | 2     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 6     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 29.9  | 29.9  | 29.9  | 29.9  | 29.9  |     | 36.7  | 36.7  |     | 36.7  | 36.7  | 36.7  |
| Total Split (s)         | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  |     | 37.0  | 37.0  |     | 37.0  | 37.0  | 37.0  |
| Total Split (%)         | 63.0% | 63.0% | 63.0% | 63.0% | 63.0% |     | 37.0% | 37.0% |     | 37.0% | 37.0% | 37.0% |
| Maximum Green (s)       | 57.1  | 57.1  | 57.1  | 57.1  | 57.1  |     | 30.3  | 30.3  |     | 30.3  | 30.3  | 30.3  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   |     | 3.3   | 3.3   |     | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   |     | 3.4   | 3.4   |     | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   |     | 6.7   | 6.7   |     |       | 6.7   | 6.7   |
| Lead/Lag                |       |       |       |       |       |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | C-Max | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |     | 23.0  | 23.0  |     | 23.0  | 23.0  | 23.0  |
| Pedestrian Calls (#/hr) | 20    | 20    | 20    | 20    | 20    |     | 30    | 30    |     | 30    | 30    | 30    |
| Act Effct Green (s)     | 64.7  | 64.7  | 64.7  | 64.7  | 64.7  |     | 22.7  | 22.7  |     |       | 22.7  | 22.7  |
| Actuated g/C Ratio      | 0.65  | 0.65  | 0.65  | 0.65  | 0.65  |     | 0.23  | 0.23  |     |       | 0.23  | 0.23  |
| v/c Ratio               | 0.13  | 0.65  | 0.07  | 0.21  | 0.41  |     | 0.17  | 0.08  |     |       | 0.48  | 0.30  |
| Control Delay           | 5.9   | 8.4   | 0.7   | 10.5  | 6.8   |     | 28.9  | 11.0  |     |       | 37.2  | 6.6   |
| Queue Delay             | 0.0   | 0.1   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 5.9   | 8.5   | 0.7   | 10.5  | 6.8   |     | 28.9  | 11.0  |     |       | 37.2  | 6.6   |
| LOS                     | A     | A     | A     | B     | A     |     | C     | B     |     |       | D     | A     |
| Approach Delay          |       | 8.1   |       |       | 7.0   |     |       | 21.8  |     |       | 22.2  |       |
| Approach LOS            |       | A     |       |       | A     |     |       | C     |     |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 9.5

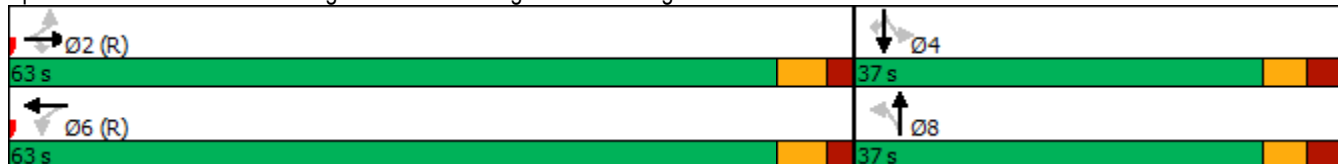
Intersection LOS: A

Intersection Capacity Utilization 66.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road



## 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive &amp; Ogilvie Road

BG 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 207                                                                               | 1061                                                                              | 165                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 120                                                                                | 69                                                                                  | 26                                                                                  | 140                                                                                 | 47                                                                                  | 159                                                                                 |
| Future Volume (vph)        | 207                                                                               | 1061                                                                              | 165                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 120                                                                                | 69                                                                                  | 26                                                                                  | 140                                                                                 | 47                                                                                  | 159                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 40.0                                                                              | 45.0                                                                              |                                                                                   | 70.0                                                                              | 30.0                                                                               |                                                                                     | 0.0                                                                                 | 20.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                  |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                               |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.97                                                                              |                                                                                   | 0.90                                                                              |                                                                                   |                                                                                   | 0.83                                                                              | 0.98                                                                               | 0.99                                                                                |                                                                                     | 0.98                                                                                | 0.97                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    | 0.959                                                                               |                                                                                     |                                                                                     | 0.884                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1631                                                                               | 1632                                                                                | 0                                                                                   | 1647                                                                                | 1487                                                                                | 0                                                                                   |
| Flt Permitted              | 0.226                                                                             |                                                                                   |                                                                                   | 0.245                                                                             |                                                                                   |                                                                                   | 0.539                                                                              |                                                                                     |                                                                                     | 0.695                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 387                                                                               | 3357                                                                              | 1349                                                                              | 433                                                                               | 3357                                                                              | 1248                                                                              | 907                                                                                | 1632                                                                                | 0                                                                                   | 1182                                                                                | 1487                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 121                                                                               |                                                                                   |                                                                                   | 121                                                                               |                                                                                    | 20                                                                                  |                                                                                     |                                                                                     | 159                                                                                 |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                    | 345.6                                                                               |                                                                                     |                                                                                     | 177.6                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                    | 20.7                                                                                |                                                                                     |                                                                                     | 10.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 73                                                                                |                                                                                   | 40                                                                                | 40                                                                                |                                                                                   | 73                                                                                | 27                                                                                 |                                                                                     | 21                                                                                  | 21                                                                                  |                                                                                     | 27                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 6%                                                                                 | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 207                                                                               | 1061                                                                              | 165                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 120                                                                                | 69                                                                                  | 26                                                                                  | 140                                                                                 | 47                                                                                  | 159                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 207                                                                               | 1061                                                                              | 165                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 120                                                                                | 95                                                                                  | 0                                                                                   | 140                                                                                 | 206                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

BG 2037 PM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | pm+pt                                                                             | NA                                                                                | Perm                                                                              | pm+pt                                                                             | NA                                                                                | Perm                                                                              | Perm                                                                                | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                   | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                                | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 37.4                                                                                | 37.4                                                                                |                                                                                     | 37.4                                                                                | 37.4                                                                                |                                                                                     |
| Total Split (s)         | 20.0                                                                              | 37.0                                                                              | 37.0                                                                              | 20.0                                                                              | 37.0                                                                              | 37.0                                                                              | 38.0                                                                                | 38.0                                                                                |                                                                                     | 38.0                                                                                | 38.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 37.0%                                                                             | 37.0%                                                                             | 20.0%                                                                             | 37.0%                                                                             | 37.0%                                                                             | 38.0%                                                                               | 38.0%                                                                               |                                                                                     | 38.0%                                                                               | 38.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 15.3                                                                              | 31.0                                                                              | 31.0                                                                              | 15.3                                                                              | 31.0                                                                              | 31.0                                                                              | 30.6                                                                                | 30.6                                                                                |                                                                                     | 30.6                                                                                | 30.6                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 4.4                                                                                 | 4.4                                                                                 |                                                                                     | 4.4                                                                                 | 4.4                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 7.4                                                                                 | 7.4                                                                                 |                                                                                     | 7.4                                                                                 | 7.4                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                 | Lag                                                                                 |                                                                                     | Lag                                                                                 | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                 | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                                | None                                                                                |                                                                                     | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               | 2.0                                                                                 | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              | 28.0                                                                                | 28.0                                                                                |                                                                                     | 28.0                                                                                | 28.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   | 30                                                                                | 30                                                                                | 20                                                                                  | 20                                                                                  |                                                                                     | 20                                                                                  | 20                                                                                  |                                                                                     |
| Act Effect Green (s)    | 62.6                                                                              | 59.1                                                                              | 59.1                                                                              | 52.6                                                                              | 45.4                                                                              | 45.4                                                                              | 20.3                                                                                | 20.3                                                                                |                                                                                     | 20.3                                                                                | 20.3                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.63                                                                              | 0.59                                                                              | 0.59                                                                              | 0.53                                                                              | 0.45                                                                              | 0.45                                                                              | 0.20                                                                                | 0.20                                                                                |                                                                                     | 0.20                                                                                | 0.20                                                                                |                                                                                     |
| v/c Ratio               | 0.54                                                                              | 0.54                                                                              | 0.20                                                                              | 0.04                                                                              | 0.55                                                                              | 0.17                                                                              | 0.66                                                                                | 0.27                                                                                |                                                                                     | 0.59                                                                                | 0.48                                                                                |                                                                                     |
| Control Delay           | 20.9                                                                              | 14.6                                                                              | 7.0                                                                               | 8.7                                                                               | 16.5                                                                              | 2.0                                                                               | 51.3                                                                                | 25.5                                                                                |                                                                                     | 44.1                                                                                | 12.1                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 20.9                                                                              | 14.6                                                                              | 7.0                                                                               | 8.7                                                                               | 16.5                                                                              | 2.0                                                                               | 51.3                                                                                | 25.5                                                                                |                                                                                     | 44.1                                                                                | 12.1                                                                                |                                                                                     |
| LOS                     | C                                                                                 | B                                                                                 | A                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | D                                                                                   | C                                                                                   |                                                                                     | D                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 14.6                                                                              |                                                                                   |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                     | 39.9                                                                                |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | D                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 19 (19%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 17.7

Intersection LOS: B

Intersection Capacity Utilization 87.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: City Park Drive/Bathgate Drive & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | Ped  | Ped  |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 20   | 20   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

1900/2000 City Park Drive  
18: Residential/Cadboro Road & Ogilvie Road

BG 2037 PM



| Lane Group                 | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT   | SBR   |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|------|-------|-------|
| Lane Configurations        |      | ↑↑    |       |      | ↑↑    |       |      |      | ↑     |      |       | ↑     |
| Traffic Volume (vph)       | 0    | 1833  | 14    | 0    | 1222  | 70    | 0    | 0    | 1     | 0    | 0     | 97    |
| Future Volume (vph)        | 0    | 1833  | 14    | 0    | 1222  | 70    | 0    | 0    | 1     | 0    | 0     | 97    |
| Ideal Flow (vphpl)         | 1800 | 1800  | 1800  | 1800 | 1800  | 1800  | 1800 | 1800 | 1800  | 1800 | 1800  | 1800  |
| Lane Util. Factor          | 1.00 | 0.95  | 0.95  | 1.00 | 0.95  | 0.95  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  |
| Frnt                       |      | 0.999 |       |      | 0.992 |       |      |      | 0.865 |      |       | 0.865 |
| Flt Protected              |      |       |       |      |       |       |      |      |       |      |       |       |
| Satd. Flow (prot)          | 0    | 3387  | 0     | 0    | 3363  | 0     | 0    | 0    | 1543  | 0    | 0     | 1543  |
| Flt Permitted              |      |       |       |      |       |       |      |      |       |      |       |       |
| Satd. Flow (perm)          | 0    | 3387  | 0     | 0    | 3363  | 0     | 0    | 0    | 1543  | 0    | 0     | 1543  |
| Right Turn on Red          |      |       | Yes   |      |       | Yes   |      |      | Yes   |      |       | Yes   |
| Satd. Flow (RTOR)          |      | 1     |       |      | 9     |       |      |      | 33    |      |       | 53    |
| Link Speed (k/h)           |      | 60    |       |      | 60    |       |      | 60   |       |      | 60    |       |
| Link Distance (m)          |      | 264.5 |       |      | 257.6 |       |      | 90.1 |       |      | 116.1 |       |
| Travel Time (s)            |      | 15.9  |       |      | 15.5  |       |      | 5.4  |       |      | 7.0   |       |
| Peak Hour Factor           | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  |
| Adj. Flow (vph)            | 0    | 1833  | 14    | 0    | 1222  | 70    | 0    | 0    | 1     | 0    | 0     | 97    |
| Shared Lane Traffic (%)    |      |       |       |      |       |       |      |      |       |      |       |       |
| Lane Group Flow (vph)      | 0    | 1847  | 0     | 0    | 1292  | 0     | 0    | 0    | 1     | 0    | 0     | 97    |
| Enter Blocked Intersection | No   | No    | No    | No   | No    | No    | No   | No   | No    | No   | No    | No    |
| Lane Alignment             | Left | Left  | Right | Left | Left  | Right | Left | Left | Right | Left | Left  | Right |
| Median Width(m)            |      | 3.7   |       |      | 3.7   |       |      | 0.0  |       |      | 0.0   |       |
| Link Offset(m)             |      | 0.0   |       |      | 0.0   |       |      | 0.0  |       |      | 0.0   |       |
| Crosswalk Width(m)         |      | 1.6   |       |      | 1.6   |       |      | 1.6  |       |      | 1.6   |       |
| Two way Left Turn Lane     |      |       |       |      |       |       |      |      |       |      |       |       |
| Headway Factor             | 1.06 | 1.06  | 1.06  | 1.06 | 1.06  | 1.06  | 1.06 | 1.06 | 1.06  | 1.06 | 1.06  | 1.06  |
| Turning Speed (k/h)        | 97   |       | 97    | 97   |       | 97    | 97   |      | 97    | 97   |       | 97    |
| Number of Detectors        |      | 2     |       |      | 2     |       |      |      | 1     |      |       | 1     |
| Detector Template          |      | Thru  |       |      | Thru  |       |      |      | Right |      |       | Right |
| Leading Detector (m)       |      | 10.0  |       |      | 10.0  |       |      |      | 2.0   |      |       | 2.0   |
| Trailing Detector (m)      |      | 0.0   |       |      | 0.0   |       |      |      | 0.0   |      |       | 0.0   |
| Detector 1 Position(m)     |      | 0.0   |       |      | 0.0   |       |      |      | 0.0   |      |       | 0.0   |
| Detector 1 Size(m)         |      | 0.6   |       |      | 0.6   |       |      |      | 2.0   |      |       | 2.0   |
| Detector 1 Type            |      | Cl+Ex |       |      | Cl+Ex |       |      |      | Cl+Ex |      |       | Cl+Ex |
| Detector 1 Channel         |      |       |       |      |       |       |      |      |       |      |       |       |
| Detector 1 Extend (s)      |      | 0.0   |       |      | 0.0   |       |      |      | 0.0   |      |       | 0.0   |
| Detector 1 Queue (s)       |      | 0.0   |       |      | 0.0   |       |      |      | 0.0   |      |       | 0.0   |
| Detector 1 Delay (s)       |      | 0.0   |       |      | 0.0   |       |      |      | 0.0   |      |       | 0.0   |
| Detector 2 Position(m)     |      | 9.4   |       |      | 9.4   |       |      |      |       |      |       |       |
| Detector 2 Size(m)         |      | 0.6   |       |      | 0.6   |       |      |      |       |      |       |       |
| Detector 2 Type            |      | Cl+Ex |       |      | Cl+Ex |       |      |      |       |      |       |       |
| Detector 2 Channel         |      |       |       |      |       |       |      |      |       |      |       |       |
| Detector 2 Extend (s)      |      | 0.0   |       |      | 0.0   |       |      |      |       |      |       |       |
| Turn Type                  |      | NA    |       |      | NA    |       |      |      | Perm  |      |       | Perm  |
| Protected Phases           |      | 2     |       |      | 6     |       |      |      |       |      |       |       |
| Permitted Phases           |      |       |       |      |       |       |      |      | 8     |      |       | 4     |
| Detector Phase             |      | 2     |       |      | 6     |       |      |      | 8     |      |       | 4     |
| Switch Phase               |      |       |       |      |       |       |      |      |       |      |       |       |
| Minimum Initial (s)        |      | 10.0  |       |      | 10.0  |       |      |      | 5.0   |      |       | 5.0   |

1900/2000 City Park Drive  
18: Residential/Cadboro Road & Ogilvie Road

BG 2037 PM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Minimum Split (s)       |                                                                                   | 35.0                                                                              |                                                                                   |                                                                                   | 35.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 40.0                                                                                |                                                                                     |                                                                                     | 40.0                                                                                |
| Total Split (s)         |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 40.0                                                                                |                                                                                     |                                                                                     | 40.0                                                                                |
| Total Split (%)         |                                                                                   | 60.0%                                                                             |                                                                                   |                                                                                   | 60.0%                                                                             |                                                                                   |                                                                                    |                                                                                     | 40.0%                                                                               |                                                                                     |                                                                                     | 40.0%                                                                               |
| Maximum Green (s)       |                                                                                   | 54.0                                                                              |                                                                                   |                                                                                   | 54.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 36.0                                                                                |                                                                                     |                                                                                     | 36.0                                                                                |
| Yellow Time (s)         |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    |                                                                                     | 3.0                                                                                 |                                                                                     |                                                                                     | 3.0                                                                                 |
| All-Red Time (s)        |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                    |                                                                                     | 1.0                                                                                 |                                                                                     |                                                                                     | 1.0                                                                                 |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Total Lost Time (s)     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     | 4.0                                                                                 |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   |                                                                                   | 3.0                                                                               |                                                                                   |                                                                                   | 3.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 3.0                                                                                 |                                                                                     |                                                                                     | 3.0                                                                                 |
| Recall Mode             |                                                                                   | C-Max                                                                             |                                                                                   |                                                                                   | C-Max                                                                             |                                                                                   |                                                                                    |                                                                                     | None                                                                                |                                                                                     |                                                                                     | None                                                                                |
| Walk Time (s)           |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 24.0                                                                                |                                                                                     |                                                                                     | 24.0                                                                                |
| Flash Dont Walk (s)     |                                                                                   | 14.0                                                                              |                                                                                   |                                                                                   | 14.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 12.0                                                                                |                                                                                     |                                                                                     | 12.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    |                                                                                     | 20                                                                                  |                                                                                     |                                                                                     | 20                                                                                  |
| Act Effct Green (s)     |                                                                                   | 74.7                                                                              |                                                                                   |                                                                                   | 74.7                                                                              |                                                                                   |                                                                                    |                                                                                     | 18.4                                                                                |                                                                                     |                                                                                     | 18.4                                                                                |
| Actuated g/C Ratio      |                                                                                   | 0.75                                                                              |                                                                                   |                                                                                   | 0.75                                                                              |                                                                                   |                                                                                    |                                                                                     | 0.18                                                                                |                                                                                     |                                                                                     | 0.18                                                                                |
| v/c Ratio               |                                                                                   | 0.73                                                                              |                                                                                   |                                                                                   | 0.51                                                                              |                                                                                   |                                                                                    |                                                                                     | 0.00                                                                                |                                                                                     |                                                                                     | 0.30                                                                                |
| Control Delay           |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 16.3                                                                                |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Total Delay             |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 16.3                                                                                |
| LOS                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |
| Approach Delay          |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 16.3                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 4 (4%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 13.0

Intersection LOS: B

Intersection Capacity Utilization 66.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 18: Residential/Cadboro Road & Ogilvie Road



1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

BG 2037 PM

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |  |                                                                                   |  |
| Traffic Volume (vph)       | 237                                                                               | 981                                                                               | 834                                                                               | 189                                                                               | 488                                                                               | 1019                                                                              |
| Future Volume (vph)        | 237                                                                               | 981                                                                               | 834                                                                               | 189                                                                               | 488                                                                               | 1019                                                                              |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Storage Length (m)         | 0.0                                                                               | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   |
| Storage Lanes              | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.984                                                                             |
| Satd. Flow (prot)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 3210                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.521                                                                             |
| Satd. Flow (perm)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 1700                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 584                                                                               |                                                                                   | 189                                                                               |                                                                                   |                                                                                   |
| Link Speed (k/h)           | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)          | 216.4                                                                             |                                                                                   | 230.9                                                                             |                                                                                   |                                                                                   | 341.9                                                                             |
| Travel Time (s)            | 13.0                                                                              |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 20.5                                                                              |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Heavy Vehicles (%)         | 5%                                                                                | 5%                                                                                | 4%                                                                                | 4%                                                                                | 6%                                                                                | 6%                                                                                |
| Adj. Flow (vph)            | 237                                                                               | 981                                                                               | 834                                                                               | 189                                                                               | 488                                                                               | 1019                                                                              |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 237                                                                               | 981                                                                               | 834                                                                               | 189                                                                               | 0                                                                                 | 1507                                                                              |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)            | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)             | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)         | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)        | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |
| Leading Detector (m)       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Size(m)         | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 2 Position(m)     |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |
| Detector 2 Size(m)         |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |
| Detector 2 Type            |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Turn Type                  | Prot                                                                              | Free                                                                              | NA                                                                                | pm+ov                                                                             | pm+pt                                                                             | NA                                                                                |
| Protected Phases           | 8                                                                                 |                                                                                   | 2                                                                                 | 8                                                                                 | 1                                                                                 | 6                                                                                 |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

BG 2037 PM



| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Permitted Phases        | Free  |       |       | 2     | 6     |       |
| Detector Phase          | 8     |       | 2     | 8     | 1     | 6     |
| Switch Phase            |       |       |       |       |       |       |
| Minimum Initial (s)     | 5.0   |       | 10.0  | 5.0   | 5.0   | 1.0   |
| Minimum Split (s)       | 25.3  |       | 30.5  | 25.3  | 11.0  | 30.5  |
| Total Split (s)         | 30.0  |       | 52.0  | 30.0  | 28.0  | 80.0  |
| Total Split (%)         | 27.3% |       | 47.3% | 27.3% | 25.5% | 72.7% |
| Maximum Green (s)       | 23.7  |       | 45.5  | 23.7  | 22.0  | 73.5  |
| Yellow Time (s)         | 3.3   |       | 4.2   | 3.3   | 4.2   | 4.2   |
| All-Red Time (s)        | 3.0   |       | 2.3   | 3.0   | 1.8   | 2.3   |
| Lost Time Adjust (s)    | 0.0   |       | 0.0   | 0.0   |       | 0.0   |
| Total Lost Time (s)     | 6.3   |       | 6.5   | 6.3   |       | 6.5   |
| Lead/Lag                |       |       | Lag   |       | Lead  |       |
| Lead-Lag Optimize?      |       |       | Yes   |       | Yes   |       |
| Vehicle Extension (s)   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  |       | C-Max | None  | Max   | C-Max |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 12.0  |       | 17.0  | 12.0  |       | 17.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     | 0     |       | 0     |
| Act Effect Green (s)    | 20.0  | 110.0 | 45.5  | 72.0  |       | 77.2  |
| Actuated g/C Ratio      | 0.18  | 1.00  | 0.41  | 0.65  |       | 0.70  |
| v/c Ratio               | 0.80  | 0.67  | 0.61  | 0.18  |       | 0.98  |
| Control Delay           | 61.9  | 2.4   | 27.6  | 1.2   |       | 32.2  |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay             | 61.9  | 2.4   | 27.6  | 1.2   |       | 32.2  |
| LOS                     | E     | A     | C     | A     |       | C     |
| Approach Delay          | 14.0  |       | 22.7  |       |       | 32.2  |
| Approach LOS            | B     |       | C     |       |       | C     |

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 23.7

Intersection LOS: C

Intersection Capacity Utilization 99.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 22: Blair Road & Hwy 174 EB off



## 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road &amp; Ogilvie Road

BG 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 188                                                                               | 1711                                                                              | 61                                                                                | 94                                                                                | 1336                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Future Volume (vph)        | 188                                                                               | 1711                                                                              | 61                                                                                | 94                                                                                | 1336                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 70.0                                                                              |                                                                                   | 0.0                                                                               | 15.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 35.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                                | 0.98                                                                                |                                                                                     |                                                                                     | 0.99                                                                                | 0.99                                                                                |
| Frt                        |                                                                                   | 0.995                                                                             |                                                                                   |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                     | 0.864                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.958                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3362                                                                              | 0                                                                                 | 1695                                                                              | 3369                                                                              | 0                                                                                 | 1662                                                                                | 1476                                                                                | 0                                                                                   | 0                                                                                   | 1709                                                                                | 1517                                                                                |
| Flt Permitted              | 0.129                                                                             |                                                                                   |                                                                                   | 0.072                                                                             |                                                                                   |                                                                                   | 0.736                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.721                                                                               |                                                                                     |
| Satd. Flow (perm)          | 230                                                                               | 3362                                                                              | 0                                                                                 | 128                                                                               | 3369                                                                              | 0                                                                                 | 1267                                                                                | 1476                                                                                | 0                                                                                   | 0                                                                                   | 1274                                                                                | 1497                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 3                                                                                 |                                                                                   |                                                                                     | 39                                                                                  |                                                                                     |                                                                                     |                                                                                     | 96                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 314.1                                                                             |                                                                                   |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                     | 176.2                                                                               |                                                                                     |                                                                                     |                                                                                     | 174.1                                                                               |
| Travel Time (s)            |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     |                                                                                     | 10.4                                                                                |
| Confl. Peds. (#/hr)        | 24                                                                                |                                                                                   | 34                                                                                | 34                                                                                |                                                                                   | 24                                                                                | 16                                                                                  |                                                                                     | 11                                                                                  | 11                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 22                                                                                |                                                                                     |                                                                                     | 3                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                  | 4%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 188                                                                               | 1711                                                                              | 61                                                                                | 94                                                                                | 1336                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 188                                                                               | 1772                                                                              | 0                                                                                 | 94                                                                                | 1374                                                                              | 0                                                                                 | 52                                                                                  | 43                                                                                  | 0                                                                                   | 0                                                                                   | 33                                                                                  | 96                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road & Ogilvie Road

BG 2037 PM

| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector 2 Extend (s)   |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |       |
| Turn Type               | pm+pt | NA    |     | pm+pt | NA    |     | Perm  | NA    |     | Perm  | NA    | Perm  |
| Protected Phases        | 5     | 2     |     | 1     | 6     |     |       | 8     |     |       | 4     |       |
| Permitted Phases        | 2     |       |     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 5     | 2     |     | 1     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 5.0   | 10.0  |     | 5.0   | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.7   | 33.6  |     | 9.7   | 33.6  |     | 40.2  | 40.2  |     | 40.2  | 40.2  | 40.2  |
| Total Split (s)         | 15.0  | 65.0  |     | 15.0  | 65.0  |     | 40.0  | 40.0  |     | 40.0  | 40.0  | 40.0  |
| Total Split (%)         | 12.5% | 54.2% |     | 12.5% | 54.2% |     | 33.3% | 33.3% |     | 33.3% | 33.3% | 33.3% |
| Maximum Green (s)       | 10.3  | 59.4  |     | 10.3  | 59.4  |     | 32.8  | 32.8  |     | 32.8  | 32.8  | 32.8  |
| Yellow Time (s)         | 3.7   | 3.7   |     | 3.7   | 3.7   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 1.0   | 1.9   |     | 1.0   | 1.9   |     | 4.2   | 4.2   |     | 4.2   | 4.2   | 4.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 4.7   | 5.6   |     | 4.7   | 5.6   |     | 7.2   | 7.2   |     |       | 7.2   | 7.2   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   |     | Yes   | Yes   |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  | C-Max |     | None  | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           |       | 15.0  |     |       | 15.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 13.0  |     |       | 13.0  |     | 26.0  | 26.0  |     | 26.0  | 26.0  | 26.0  |
| Pedestrian Calls (#/hr) |       | 25    |     |       | 25    |     | 10    | 10    |     | 10    | 10    | 10    |
| Act Effect Green (s)    | 91.5  | 79.5  |     | 85.0  | 76.2  |     | 15.1  | 15.1  |     |       | 15.1  | 15.1  |
| Actuated g/C Ratio      | 0.76  | 0.66  |     | 0.71  | 0.64  |     | 0.13  | 0.13  |     |       | 0.13  | 0.13  |
| v/c Ratio               | 0.60  | 0.80  |     | 0.48  | 0.64  |     | 0.33  | 0.20  |     |       | 0.21  | 0.35  |
| Control Delay           | 16.9  | 19.9  |     | 19.8  | 17.0  |     | 50.3  | 15.6  |     |       | 46.4  | 11.2  |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 16.9  | 19.9  |     | 19.8  | 17.0  |     | 50.3  | 15.6  |     |       | 46.4  | 11.2  |
| LOS                     | B     | B     |     | B     | B     |     | D     | B     |     |       | D     | B     |
| Approach Delay          |       | 19.6  |     |       | 17.2  |     |       | 34.6  |     |       | 20.2  |       |
| Approach LOS            |       | B     |     |       | B     |     |       | C     |     |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.1

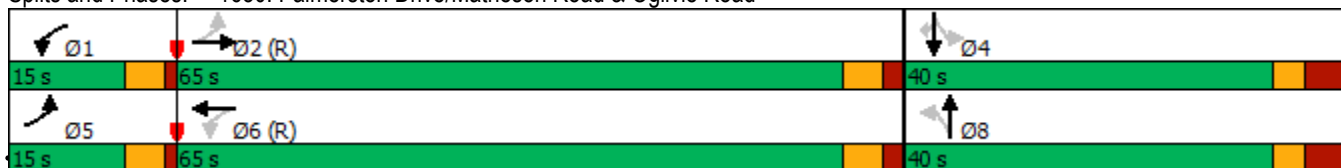
Intersection LOS: B

Intersection Capacity Utilization 87.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1630: Palmerston Drive/Matheson Road & Ogilvie Road



Synchro 11 Report

04/04/2023

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

BG 2037 AM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 87                                                                                | 442                                                                               | 195                                                                               | 496                                                                               | 739                                                                               | 50                                                                                | 645                                                                                 | 654                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 111                                                                                 |
| Future Volume (vph)        | 87                                                                                | 442                                                                               | 195                                                                               | 496                                                                               | 739                                                                               | 50                                                                                | 645                                                                                 | 654                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 111                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 110.0                                                                             |                                                                                   | 0.0                                                                               | 120.0                                                                               |                                                                                     | 0.0                                                                                 | 30.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 0                                                                                 | 2                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 40.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.97                                                                              | 0.95                                                                              | 0.95                                                                              | 0.97                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.99                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.990                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     | 0.963                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3307                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3190                                                                                | 0                                                                                   |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3307                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3190                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 195                                                                               |                                                                                   | 5                                                                                 |                                                                                   |                                                                                     |                                                                                     | 427                                                                                 |                                                                                     | 30                                                                                  |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                   | 396.5                                                                             |                                                                                   |                                                                                     | 239.9                                                                               |                                                                                     |                                                                                     | 411.0                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                   | 23.8                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 25                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 27                                                                                  |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 3                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 3                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 87                                                                                | 442                                                                               | 195                                                                               | 496                                                                               | 739                                                                               | 50                                                                                | 645                                                                                 | 654                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 111                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 87                                                                                | 442                                                                               | 195                                                                               | 496                                                                               | 789                                                                               | 0                                                                                 | 645                                                                                 | 654                                                                                 | 624                                                                                 | 69                                                                                  | 445                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

BG 2037 AM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                |                                                                                   | Prot                                                                               | NA                                                                                  | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   | 3                                                                                  | 8                                                                                   |                                                                                     | 7                                                                                   | 4                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 |                                                                                   | 3                                                                                  | 8                                                                                   | 8                                                                                   | 7                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              |                                                                                   | 5.0                                                                                | 10.0                                                                                | 10.0                                                                                | 5.0                                                                                 | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 11.8                                                                              | 38.6                                                                              | 38.6                                                                              | 11.8                                                                              | 38.6                                                                              |                                                                                   | 11.5                                                                               | 35.5                                                                                | 35.5                                                                                | 11.5                                                                                | 35.5                                                                                |                                                                                     |
| Total Split (s)         | 28.0                                                                              | 39.0                                                                              | 39.0                                                                              | 28.0                                                                              | 39.0                                                                              |                                                                                   | 36.0                                                                               | 58.0                                                                                | 58.0                                                                                | 15.0                                                                                | 37.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 27.9%                                                                             | 27.9%                                                                             | 20.0%                                                                             | 27.9%                                                                             |                                                                                   | 25.7%                                                                              | 41.4%                                                                               | 41.4%                                                                               | 10.7%                                                                               | 26.4%                                                                               |                                                                                     |
| Maximum Green (s)       | 21.2                                                                              | 32.4                                                                              | 32.4                                                                              | 21.2                                                                              | 32.4                                                                              |                                                                                   | 29.5                                                                               | 51.5                                                                                | 51.5                                                                                | 8.5                                                                                 | 30.5                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.3                                                                               | 3.3                                                                               | 3.7                                                                               | 3.3                                                                               |                                                                                   | 4.2                                                                                | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 3.1                                                                               | 3.3                                                                               | 3.3                                                                               | 3.1                                                                               | 3.3                                                                               |                                                                                   | 2.3                                                                                | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 6.8                                                                               | 6.6                                                                               | 6.6                                                                               | 6.8                                                                               | 6.6                                                                               |                                                                                   | 6.5                                                                                | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                               | Lag                                                                                 | Lag                                                                                 | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               |                                                                                   | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | Max                                                                               | Max                                                                               | None                                                                              | Max                                                                               |                                                                                   | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 | 7.0                                                                                 |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                    | 22.0                                                                                | 22.0                                                                                |                                                                                     | 22.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 20                                                                                | 20                                                                                |                                                                                   | 20                                                                                |                                                                                   |                                                                                    | 25                                                                                  | 25                                                                                  |                                                                                     | 25                                                                                  |                                                                                     |
| Act Effct Green (s)     | 12.6                                                                              | 32.4                                                                              | 32.4                                                                              | 21.2                                                                              | 41.0                                                                              |                                                                                   | 29.2                                                                               | 51.5                                                                                | 51.5                                                                                | 8.2                                                                                 | 30.6                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.09                                                                              | 0.23                                                                              | 0.23                                                                              | 0.15                                                                              | 0.29                                                                              |                                                                                   | 0.21                                                                               | 0.37                                                                                | 0.37                                                                                | 0.06                                                                                | 0.22                                                                                |                                                                                     |
| v/c Ratio               | 0.58                                                                              | 0.57                                                                              | 0.39                                                                              | 1.00                                                                              | 0.81                                                                              |                                                                                   | 0.95                                                                               | 1.00                                                                                | 0.76                                                                                | 0.70                                                                                | 0.62                                                                                |                                                                                     |
| Control Delay           | 75.4                                                                              | 50.9                                                                              | 8.1                                                                               | 100.0                                                                             | 53.5                                                                              |                                                                                   | 78.5                                                                               | 80.2                                                                                | 18.2                                                                                | 99.2                                                                                | 50.2                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 75.4                                                                              | 50.9                                                                              | 8.1                                                                               | 100.0                                                                             | 53.5                                                                              |                                                                                   | 78.5                                                                               | 80.2                                                                                | 18.2                                                                                | 99.2                                                                                | 50.2                                                                                |                                                                                     |
| LOS                     | E                                                                                 | D                                                                                 | A                                                                                 | F                                                                                 | D                                                                                 |                                                                                   | E                                                                                  | F                                                                                   | B                                                                                   | F                                                                                   | D                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 42.3                                                                              |                                                                                   |                                                                                   | 71.4                                                                              |                                                                                   |                                                                                    | 59.5                                                                                |                                                                                     |                                                                                     | 56.8                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | E                                                                                 |                                                                                   |                                                                                    | E                                                                                   |                                                                                     |                                                                                     | E                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 139.7

Natural Cycle: 140

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 59.8

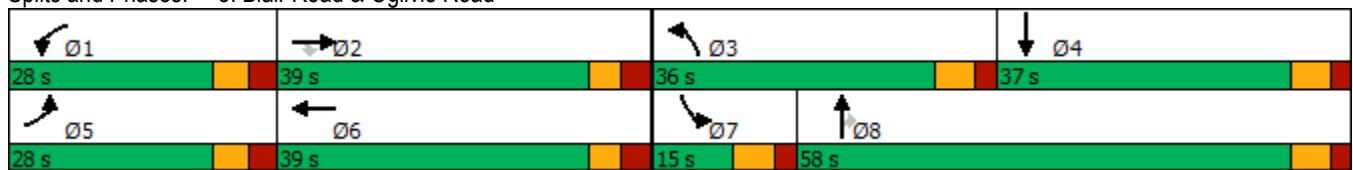
Intersection LOS: E

Intersection Capacity Utilization 94.3%

ICU Level of Service F

Analysis Period (min) 15

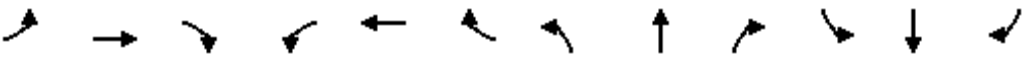
Splits and Phases: 3: Blair Road & Ogilvie Road



## 1900/2000 City Park Drive

## 6: Blair Road &amp; 1980 Ogilvie Road/Hwy 174 WB off

BG 2037 AM DR

|                            |  |       |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
|----------------------------|------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                                | EBT   | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                                 | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL  | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |   |       |  |  |  |  |  |  |  |      |  |  |
| Traffic Volume (vph)       | 87                                                                                 | 0     | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                                 | 281                                                                                 | 1455                                                                                | 0                                                                                   | 0    | 866                                                                                 | 109                                                                                 |
| Future Volume (vph)        | 87                                                                                 | 0     | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                                 | 281                                                                                 | 1455                                                                                | 0                                                                                   | 0    | 866                                                                                 | 109                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                               | 1800  | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800 | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 0.0                                                                                |       | 70.0                                                                              | 0.0                                                                               |                                                                                   | 70.0                                                                                | 60.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0  |                                                                                     | 50.0                                                                                |
| Storage Lanes              | 1                                                                                  |       | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 0                                                                                   | 0    |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 7.6                                                                                |       |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                     | 100.0                                                                               |                                                                                     |                                                                                     | 7.6  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                               | 1.00  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.97                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00 | 0.91                                                                                | 1.00                                                                                |
| Frt                        |                                                                                    |       | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                               |                                                                                     |                                                                                     |                                                                                     |      |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                              |       |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1340                                                                               | 0     | 1199                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                                | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0    | 4732                                                                                | 1473                                                                                |
| Flt Permitted              | 0.662                                                                              |       |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 934                                                                                | 0     | 1199                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                                | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0    | 4732                                                                                | 1473                                                                                |
| Right Turn on Red          |                                                                                    |       | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |      |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                    |       | 34                                                                                |                                                                                   |                                                                                   | 104                                                                                 |                                                                                     |                                                                                     |                                                                                     |      |                                                                                     | 111                                                                                 |
| Link Speed (k/h)           |                                                                                    | 60    |                                                                                   |                                                                                   | 60                                                                                |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |      | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                    | 518.9 |                                                                                   |                                                                                   | 416.4                                                                             |                                                                                     |                                                                                     | 90.2                                                                                |                                                                                     |      | 239.9                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                    | 31.1  |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                     |                                                                                     | 5.4                                                                                 |                                                                                     |      | 14.4                                                                                |                                                                                     |
| Peak Hour Factor           | 1.00                                                                               | 1.00  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00 | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 29%                                                                                | 29%   | 29%                                                                               | 2%                                                                                | 2%                                                                                | 2%                                                                                  | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 5%   | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 87                                                                                 | 0     | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                                 | 281                                                                                 | 1455                                                                                | 0                                                                                   | 0    | 866                                                                                 | 109                                                                                 |
| Shared Lane Traffic (%)    |                                                                                    |       |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 87                                                                                 | 0     | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                                 | 281                                                                                 | 1455                                                                                | 0                                                                                   | 0    | 866                                                                                 | 109                                                                                 |
| Enter Blocked Intersection | No                                                                                 | No    | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No   | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                               | Left  | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               | Left | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                    | 3.7   |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |      | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                    | 0.0   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                    | 4.9   |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |      | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                    |       |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                               | 1.06  | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06 | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                 |       | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  | 24   |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                  |       | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |      | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                               |       | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |      | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                                |       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |      | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                                |       | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |      | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                              |       | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |      | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                    |       |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                    |       |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |      | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                    |       |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |      | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                    |       |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |      | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                    |       |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                    |       |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                               |       | pm+ov                                                                             | Perm                                                                              | NA                                                                                | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |      | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                    |       | 5                                                                                 |                                                                                   | 8                                                                                 |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |      | 6                                                                                   |                                                                                     |

1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

BG 2037 AM DR

|                         |  |      |       |       |       |       |       |       |     |     |       |       |
|-------------------------|------------------------------------------------------------------------------------|------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Lane Group              | EBL                                                                                | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL | SBT   | SBR   |
| Permitted Phases        | 4                                                                                  |      | 4     | 8     |       | 8     |       |       |     |     |       | 6     |
| Detector Phase          | 4                                                                                  |      | 5     | 8     | 8     | 8     | 5     | 2     |     |     | 6     | 6     |
| Switch Phase            |                                                                                    |      |       |       |       |       |       |       |     |     |       |       |
| Minimum Initial (s)     | 10.0                                                                               |      | 5.0   | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  |     |     | 10.0  | 10.0  |
| Minimum Split (s)       | 16.8                                                                               |      | 11.4  | 36.8  | 36.8  | 36.8  | 11.4  | 30.1  |     |     | 30.1  | 30.1  |
| Total Split (s)         | 41.0                                                                               |      | 27.0  | 41.0  | 41.0  | 41.0  | 27.0  | 59.0  |     |     | 32.0  | 32.0  |
| Total Split (%)         | 41.0%                                                                              |      | 27.0% | 41.0% | 41.0% | 41.0% | 27.0% | 59.0% |     |     | 32.0% | 32.0% |
| Maximum Green (s)       | 34.2                                                                               |      | 20.6  | 34.2  | 34.2  | 34.2  | 20.6  | 52.9  |     |     | 25.9  | 25.9  |
| Yellow Time (s)         | 3.3                                                                                |      | 4.2   | 3.3   | 3.3   | 3.3   | 4.2   | 4.2   |     |     | 4.2   | 4.2   |
| All-Red Time (s)        | 3.5                                                                                |      | 2.2   | 3.5   | 3.5   | 3.5   | 2.2   | 1.9   |     |     | 1.9   | 1.9   |
| Lost Time Adjust (s)    | 0.0                                                                                |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.8                                                                                |      | 6.4   | 6.8   | 6.8   | 6.8   | 6.4   | 6.1   |     |     | 6.1   | 6.1   |
| Lead/Lag                |                                                                                    |      | Lead  |       |       |       | Lead  |       |     |     | Lag   | Lag   |
| Lead-Lag Optimize?      |                                                                                    |      | Yes   |       |       |       | Yes   |       |     |     | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0                                                                                |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |     | 3.0   | 3.0   |
| Recall Mode             | None                                                                               |      | None  | None  | None  | None  | None  | Max   |     |     | Max   | Max   |
| Walk Time (s)           |                                                                                    |      |       | 7.0   | 7.0   | 7.0   |       | 7.0   |     |     | 7.0   | 7.0   |
| Flash Dont Walk (s)     |                                                                                    |      |       | 23.0  | 23.0  | 23.0  |       | 17.0  |     |     | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |                                                                                    |      |       | 20    | 20    | 20    |       | 20    |     |     | 20    | 20    |
| Act Effct Green (s)     | 19.5                                                                               |      | 39.6  | 19.5  | 19.5  | 19.5  | 13.2  | 53.4  |     |     | 33.8  | 33.8  |
| Actuated g/C Ratio      | 0.23                                                                               |      | 0.46  | 0.23  | 0.23  | 0.23  | 0.15  | 0.62  |     |     | 0.39  | 0.39  |
| v/c Ratio               | 0.41                                                                               |      | 0.65  | 0.30  | 0.37  | 0.71  | 0.58  | 0.72  |     |     | 0.47  | 0.17  |
| Control Delay           | 33.2                                                                               |      | 20.7  | 28.3  | 29.6  | 28.9  | 39.5  | 15.5  |     |     | 22.7  | 5.8   |
| Queue Delay             | 0.0                                                                                |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Delay             | 33.2                                                                               |      | 20.7  | 28.3  | 29.6  | 28.9  | 39.5  | 15.5  |     |     | 22.7  | 5.8   |
| LOS                     | C                                                                                  |      | C     | C     | C     | C     | D     | B     |     |     | C     | A     |
| Approach Delay          |                                                                                    | 23.1 |       |       | 29.0  |       |       | 19.4  |     |     | 20.8  |       |
| Approach LOS            |                                                                                    | C    |       |       | C     |       |       | B     |     |     | C     |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 86

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 21.7

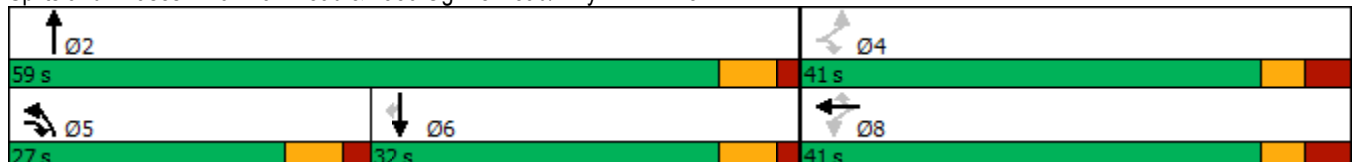
Intersection LOS: C

Intersection Capacity Utilization 81.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off



## 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie &amp; Ogilvie Road

BG 2037 AM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                    |  |  |  |  |  |
| Traffic Volume (vph)       | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 61                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Future Volume (vph)        | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 61                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                  |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.97                                                                              |                                                                                   | 0.87                                                                              | 0.96                                                                              |                                                                                   | 0.81                                                                              |                                                                                    | 0.96                                                                                | 0.93                                                                                | 0.95                                                                                |                                                                                     |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.965                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                  | 1626                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.243                                                                             |                                                                                   |                                                                                   | 0.378                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.786                                                                               |                                                                                     | 0.704                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 420                                                                               | 3390                                                                              | 1320                                                                              | 641                                                                               | 3357                                                                              | 1211                                                                              | 0                                                                                  | 1269                                                                                | 1334                                                                                | 1193                                                                                | 1784                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 78                                                                                |                                                                                   |                                                                                   | 174                                                                               |                                                                                    |                                                                                     | 61                                                                                  |                                                                                     |                                                                                     | 56                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                    | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                    | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 100                                                                               |                                                                                   | 65                                                                                | 65                                                                                |                                                                                   | 100                                                                               | 53                                                                                 |                                                                                     | 51                                                                                  | 51                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                 | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 61                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 0                                                                                  | 82                                                                                  | 61                                                                                  | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Confl. Bikes (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |

# 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie & Ogilvie Road

BG 2037 AM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                               | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 6                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                  | 8                                                                                   | 8                                                                                   | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                               | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 33.5                                                                               | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                |
| Total Split (s)         | 61.0                                                                              | 61.0                                                                              | 61.0                                                                              | 61.0                                                                              | 61.0                                                                              | 61.0                                                                              | 34.0                                                                               | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                |
| Total Split (%)         | 61.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 34.0%                                                                              | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               |
| Maximum Green (s)       | 54.9                                                                              | 54.9                                                                              | 54.9                                                                              | 54.9                                                                              | 54.9                                                                              | 54.9                                                                              | 27.5                                                                               | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.3                                                                                | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 |
| All-Red Time (s)        | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 3.2                                                                                | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                    | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               |                                                                                    | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lag                                                                                | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 2.0                                                                                | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |
| Flash Dont Walk (s)     | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              | 25.0                                                                               | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                |
| Pedestrian Calls (#/hr) | 35                                                                                | 35                                                                                | 35                                                                                | 35                                                                                | 35                                                                                | 35                                                                                | 35                                                                                 | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  |
| Act Effect Green (s)    | 68.7                                                                              | 68.7                                                                              | 68.7                                                                              | 68.7                                                                              | 68.7                                                                              | 68.7                                                                              |                                                                                    | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                |
| Actuated g/C Ratio      | 0.69                                                                              | 0.69                                                                              | 0.69                                                                              | 0.69                                                                              | 0.69                                                                              | 0.69                                                                              |                                                                                    | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                |
| v/c Ratio               | 0.35                                                                              | 0.29                                                                              | 0.08                                                                              | 0.20                                                                              | 0.44                                                                              | 0.20                                                                              |                                                                                    | 0.32                                                                                | 0.19                                                                                | 0.02                                                                                | 0.01                                                                                | 0.03                                                                                |
| Control Delay           | 8.1                                                                               | 2.9                                                                               | 0.3                                                                               | 11.7                                                                              | 11.4                                                                              | 2.3                                                                               |                                                                                    | 34.8                                                                                | 9.1                                                                                 | 27.2                                                                                | 27.0                                                                                | 0.1                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                    | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 8.1                                                                               | 2.9                                                                               | 0.3                                                                               | 11.7                                                                              | 11.4                                                                              | 2.3                                                                               |                                                                                    | 34.8                                                                                | 9.1                                                                                 | 27.2                                                                                | 27.0                                                                                | 0.1                                                                                 |
| LOS                     | A                                                                                 | A                                                                                 | A                                                                                 | B                                                                                 | B                                                                                 | A                                                                                 |                                                                                    | C                                                                                   | A                                                                                   | C                                                                                   | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 3.3                                                                               |                                                                                   |                                                                                   | 10.2                                                                              |                                                                                   |                                                                                    | 23.8                                                                                |                                                                                     |                                                                                     | 11.9                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | C                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 13 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 8.5

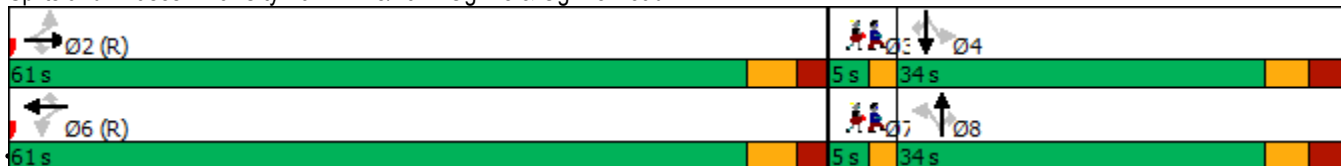
Intersection LOS: A

Intersection Capacity Utilization 74.2%

ICU Level of Service D

Analysis Period (min) 15

### Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



Synchro 11 Report

04/04/2023

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Detector 2 Extend (s)   |      |      |
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

## 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road &amp; Ogilvie Road

BG 2037 AM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 99                                                                                | 832                                                                               | 27                                                                                | 19                                                                                | 1151                                                                              | 44                                                                                | 9                                                                                   | 1                                                                                   | 12                                                                                  | 42                                                                                  | 11                                                                                  | 63                                                                                  |
| Future Volume (vph)        | 99                                                                                | 832                                                                               | 27                                                                                | 19                                                                                | 1151                                                                              | 44                                                                                | 9                                                                                   | 1                                                                                   | 12                                                                                  | 42                                                                                  | 11                                                                                  | 63                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 60.0                                                                              |                                                                                   | 80.0                                                                              | 90.0                                                                              |                                                                                   | 0.0                                                                               | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 20.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.99                                                                              |                                                                                   | 0.95                                                                              | 0.99                                                                              | 1.00                                                                              |                                                                                   | 0.96                                                                                | 0.95                                                                                |                                                                                     |                                                                                     | 0.96                                                                                | 0.94                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                     | 0.862                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.962                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3324                                                                              | 0                                                                                 | 1695                                                                                | 1454                                                                                | 0                                                                                   | 0                                                                                   | 1717                                                                                | 1517                                                                                |
| Flt Permitted              | 0.195                                                                             |                                                                                   |                                                                                   | 0.316                                                                             |                                                                                   |                                                                                   | 0.722                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.774                                                                               |                                                                                     |
| Satd. Flow (perm)          | 344                                                                               | 3390                                                                              | 1434                                                                              | 553                                                                               | 3324                                                                              | 0                                                                                 | 1232                                                                                | 1454                                                                                | 0                                                                                   | 0                                                                                   | 1329                                                                                | 1429                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 40                                                                                |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     |                                                                                     | 61                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                     | 86.0                                                                                |                                                                                     |                                                                                     |                                                                                     | 56.6                                                                                |
| Travel Time (s)            |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                     | 5.2                                                                                 |                                                                                     |                                                                                     |                                                                                     | 3.4                                                                                 |
| Confl. Peds. (#/hr)        | 41                                                                                |                                                                                   | 17                                                                                | 17                                                                                |                                                                                   | 41                                                                                | 47                                                                                  |                                                                                     | 48                                                                                  | 48                                                                                  |                                                                                     | 47                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 99                                                                                | 832                                                                               | 27                                                                                | 19                                                                                | 1151                                                                              | 44                                                                                | 9                                                                                   | 1                                                                                   | 12                                                                                  | 42                                                                                  | 11                                                                                  | 63                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 99                                                                                | 832                                                                               | 27                                                                                | 19                                                                                | 1195                                                                              | 0                                                                                 | 9                                                                                   | 13                                                                                  | 0                                                                                   | 0                                                                                   | 53                                                                                  | 63                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

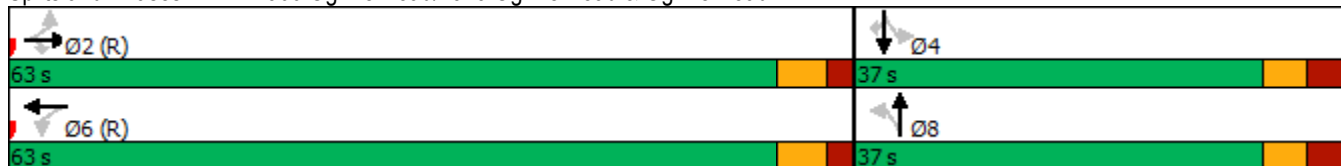
# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

BG 2037 AM DR

|                                                                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                                                              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type                                                               | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases                                                        | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases                                                        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   |                                                                                   | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase                                                          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 6                                                                                 | 6                                                                                 |                                                                                   | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)                                                     | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              |                                                                                   | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)                                                       | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              |                                                                                   | 36.7                                                                               | 36.7                                                                                |                                                                                     | 36.7                                                                                | 36.7                                                                                | 36.7                                                                                |
| Total Split (s)                                                         | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              |                                                                                   | 37.0                                                                               | 37.0                                                                                |                                                                                     | 37.0                                                                                | 37.0                                                                                | 37.0                                                                                |
| Total Split (%)                                                         | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             |                                                                                   | 37.0%                                                                              | 37.0%                                                                               |                                                                                     | 37.0%                                                                               | 37.0%                                                                               | 37.0%                                                                               |
| Maximum Green (s)                                                       | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              |                                                                                   | 30.3                                                                               | 30.3                                                                                |                                                                                     | 30.3                                                                                | 30.3                                                                                | 30.3                                                                                |
| Yellow Time (s)                                                         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.3                                                                                | 3.3                                                                                 |                                                                                     | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 |
| All-Red Time (s)                                                        | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               |                                                                                   | 3.4                                                                                | 3.4                                                                                 |                                                                                     | 3.4                                                                                 | 3.4                                                                                 | 3.4                                                                                 |
| Lost Time Adjust (s)                                                    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)                                                     | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               |                                                                                   | 6.7                                                                                | 6.7                                                                                 |                                                                                     |                                                                                     | 6.7                                                                                 | 6.7                                                                                 |
| Lead/Lag                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)                                                   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             |                                                                                   | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)                                                           | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |
| Flash Dont Walk (s)                                                     | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              |                                                                                   | 23.0                                                                               | 23.0                                                                                |                                                                                     | 23.0                                                                                | 23.0                                                                                | 23.0                                                                                |
| Pedestrian Calls (#/hr)                                                 | 10                                                                                | 10                                                                                | 10                                                                                | 10                                                                                | 10                                                                                |                                                                                   | 30                                                                                 | 30                                                                                  |                                                                                     | 30                                                                                  | 30                                                                                  | 30                                                                                  |
| Act Effct Green (s)                                                     | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              |                                                                                   | 22.0                                                                               | 22.0                                                                                |                                                                                     |                                                                                     | 22.0                                                                                | 22.0                                                                                |
| Actuated g/C Ratio                                                      | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              |                                                                                   | 0.22                                                                               | 0.22                                                                                |                                                                                     |                                                                                     | 0.22                                                                                | 0.22                                                                                |
| v/c Ratio                                                               | 0.41                                                                              | 0.35                                                                              | 0.03                                                                              | 0.05                                                                              | 0.51                                                                              |                                                                                   | 0.03                                                                               | 0.04                                                                                |                                                                                     |                                                                                     | 0.18                                                                                | 0.17                                                                                |
| Control Delay                                                           | 17.1                                                                              | 8.5                                                                               | 1.6                                                                               | 5.7                                                                               | 5.5                                                                               |                                                                                   | 25.2                                                                               | 13.3                                                                                |                                                                                     |                                                                                     | 29.3                                                                                | 8.5                                                                                 |
| Queue Delay                                                             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay                                                             | 17.1                                                                              | 8.5                                                                               | 1.6                                                                               | 5.7                                                                               | 5.5                                                                               |                                                                                   | 25.2                                                                               | 13.3                                                                                |                                                                                     |                                                                                     | 29.3                                                                                | 8.5                                                                                 |
| LOS                                                                     | B                                                                                 | A                                                                                 | A                                                                                 | A                                                                                 | A                                                                                 |                                                                                   | C                                                                                  | B                                                                                   |                                                                                     |                                                                                     | C                                                                                   | A                                                                                   |
| Approach Delay                                                          | 9.2                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 5.5                                                                               | 18.2                                                                               |                                                                                     |                                                                                     | 18.0                                                                                |                                                                                     |                                                                                     |
| Approach LOS                                                            | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | A                                                                                 | B                                                                                  |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Intersection Summary                                                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type: Other                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Cycle Length: 100                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length: 100                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Offset: 12 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Natural Cycle: 80                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type: Actuated-Coordinated                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Maximum v/c Ratio: 0.51                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Signal Delay: 7.8                                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection LOS: A                                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization 94.4%                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| ICU Level of Service F                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min) 15                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Splits and Phases: 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road



## 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive &amp; Ogilvie Road

BG 2037 AM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 156                                                                               | 598                                                                               | 88                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 86                                                                                  | 38                                                                                  | 13                                                                                  | 119                                                                                 | 27                                                                                  | 178                                                                                 |
| Future Volume (vph)        | 156                                                                               | 598                                                                               | 88                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 86                                                                                  | 38                                                                                  | 13                                                                                  | 119                                                                                 | 27                                                                                  | 178                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 40.0                                                                              | 45.0                                                                              |                                                                                   | 70.0                                                                              | 30.0                                                                                |                                                                                     | 0.0                                                                                 | 20.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                                |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.99                                                                              |                                                                                   | 0.92                                                                              | 0.98                                                                              |                                                                                   | 0.89                                                                              | 0.99                                                                                | 0.99                                                                                |                                                                                     | 0.98                                                                                | 0.98                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     | 0.962                                                                               |                                                                                     |                                                                                     | 0.870                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1631                                                                                | 1637                                                                                | 0                                                                                   | 1647                                                                                | 1474                                                                                | 0                                                                                   |
| Flt Permitted              | 0.179                                                                             |                                                                                   |                                                                                   | 0.426                                                                             |                                                                                   |                                                                                   | 0.629                                                                               |                                                                                     |                                                                                     | 0.603                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 312                                                                               | 3357                                                                              | 1389                                                                              | 737                                                                               | 3357                                                                              | 1340                                                                              | 1069                                                                                | 1637                                                                                | 0                                                                                   | 1023                                                                                | 1474                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 121                                                                               |                                                                                   |                                                                                   | 161                                                                               |                                                                                     | 13                                                                                  |                                                                                     |                                                                                     | 178                                                                                 |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                     | 345.6                                                                               |                                                                                     |                                                                                     | 177.6                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                     | 20.7                                                                                |                                                                                     |                                                                                     | 10.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 43                                                                                |                                                                                   | 27                                                                                | 27                                                                                |                                                                                   | 43                                                                                | 14                                                                                  |                                                                                     | 23                                                                                  | 23                                                                                  |                                                                                     | 14                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 156                                                                               | 598                                                                               | 88                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 86                                                                                  | 38                                                                                  | 13                                                                                  | 119                                                                                 | 27                                                                                  | 178                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 156                                                                               | 598                                                                               | 88                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 86                                                                                  | 51                                                                                  | 0                                                                                   | 119                                                                                 | 205                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

BG 2037 AM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | pm+pt                                                                             | NA                                                                                | Perm                                                                              | pm+pt                                                                             | NA                                                                                | Perm                                                                              | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 37.4                                                                               | 37.4                                                                                |                                                                                     | 37.4                                                                                | 37.4                                                                                |                                                                                     |
| Total Split (s)         | 15.0                                                                              | 42.0                                                                              | 42.0                                                                              | 15.0                                                                              | 42.0                                                                              | 42.0                                                                              | 38.0                                                                               | 38.0                                                                                |                                                                                     | 38.0                                                                                | 38.0                                                                                |                                                                                     |
| Total Split (%)         | 15.0%                                                                             | 42.0%                                                                             | 42.0%                                                                             | 15.0%                                                                             | 42.0%                                                                             | 42.0%                                                                             | 38.0%                                                                              | 38.0%                                                                               |                                                                                     | 38.0%                                                                               | 38.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 10.3                                                                              | 36.0                                                                              | 36.0                                                                              | 10.3                                                                              | 36.0                                                                              | 36.0                                                                              | 30.6                                                                               | 30.6                                                                                |                                                                                     | 30.6                                                                                | 30.6                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 4.4                                                                                | 4.4                                                                                 |                                                                                     | 4.4                                                                                 | 4.4                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 7.4                                                                                | 7.4                                                                                 |                                                                                     | 7.4                                                                                 | 7.4                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                | Lag                                                                                 |                                                                                     | Lag                                                                                 | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              | 28.0                                                                               | 28.0                                                                                |                                                                                     | 28.0                                                                                | 28.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 15                                                                                | 15                                                                                |                                                                                   | 15                                                                                | 15                                                                                | 15                                                                                 | 15                                                                                  |                                                                                     | 15                                                                                  | 15                                                                                  |                                                                                     |
| Act Effect Green (s)    | 63.3                                                                              | 59.9                                                                              | 59.9                                                                              | 55.7                                                                              | 48.5                                                                              | 48.5                                                                              | 19.5                                                                               | 19.5                                                                                |                                                                                     | 19.5                                                                                | 19.5                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.63                                                                              | 0.60                                                                              | 0.60                                                                              | 0.56                                                                              | 0.48                                                                              | 0.48                                                                              | 0.20                                                                               | 0.20                                                                                |                                                                                     | 0.20                                                                                | 0.20                                                                                |                                                                                     |
| v/c Ratio               | 0.49                                                                              | 0.30                                                                              | 0.10                                                                              | 0.03                                                                              | 0.60                                                                              | 0.22                                                                              | 0.42                                                                               | 0.16                                                                                |                                                                                     | 0.60                                                                                | 0.48                                                                                |                                                                                     |
| Control Delay           | 25.7                                                                              | 21.4                                                                              | 10.1                                                                              | 6.1                                                                               | 12.4                                                                              | 1.2                                                                               | 38.5                                                                               | 24.0                                                                                |                                                                                     | 47.2                                                                                | 10.2                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 25.7                                                                              | 21.4                                                                              | 10.1                                                                              | 6.1                                                                               | 12.4                                                                              | 1.2                                                                               | 38.5                                                                               | 24.0                                                                                |                                                                                     | 47.2                                                                                | 10.2                                                                                |                                                                                     |
| LOS                     | C                                                                                 | C                                                                                 | B                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | D                                                                                  | C                                                                                   |                                                                                     | D                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 21.0                                                                              |                                                                                   |                                                                                   | 10.8                                                                              |                                                                                   |                                                                                    | 33.1                                                                                |                                                                                     |                                                                                     | 23.8                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 29 (29%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 17.2

Intersection LOS: B

Intersection Capacity Utilization 85.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: City Park Drive/Bathgate Drive & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | Ped  | Ped  |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 15   | 15   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

1900/2000 City Park Drive  
18: Residential/Cadboro Road & Ogilvie Road

BG 2037 AM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                     |                                                                                     |  |                                                                                     |                                                                                     |  |
| Traffic Volume (vph)       | 0                                                                                 | 1216                                                                              | 9                                                                                 | 0                                                                                 | 1271                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Future Volume (vph)        | 0                                                                                 | 1216                                                                              | 9                                                                                 | 0                                                                                 | 1271                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Fr't                       |                                                                                   | 0.999                                                                             |                                                                                   |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     | 0.865                                                                               |
| Flt Protected              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3370                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3370                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   | 7                                                                                 |                                                                                   |                                                                                     |                                                                                     | 53                                                                                  |                                                                                     |                                                                                     | 46                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                     | 90.1                                                                                |                                                                                     |                                                                                     | 116.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj. Flow (vph)            | 0                                                                                 | 1216                                                                              | 9                                                                                 | 0                                                                                 | 1271                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 1225                                                                              | 0                                                                                 | 0                                                                                 | 1328                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                     | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Detector Template          |                                                                                   | Thru                                                                              |                                                                                   |                                                                                   | Thru                                                                              |                                                                                   |                                                                                     |                                                                                     | Right                                                                               |                                                                                     |                                                                                     | Right                                                                               |
| Leading Detector (m)       |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Trailing Detector (m)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Position(m)     |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Detector 1 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Queue (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Delay (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type                  |                                                                                   | NA                                                                                |                                                                                   |                                                                                   | NA                                                                                |                                                                                   |                                                                                     |                                                                                     | Perm                                                                                |                                                                                     |                                                                                     | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Permitted Phases           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Detector Phase             |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |

1900/2000 City Park Drive  
18: Residential/Cadboro Road & Ogilvie Road

BG 2037 AM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Minimum Split (s)       |                                                                                   | 35.0                                                                              |                                                                                   |                                                                                   | 35.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 40.0                                                                                |                                                                                     |                                                                                     | 40.0                                                                                |
| Total Split (s)         |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 40.0                                                                                |                                                                                     |                                                                                     | 40.0                                                                                |
| Total Split (%)         |                                                                                   | 60.0%                                                                             |                                                                                   |                                                                                   | 60.0%                                                                             |                                                                                   |                                                                                    |                                                                                     | 40.0%                                                                               |                                                                                     |                                                                                     | 40.0%                                                                               |
| Maximum Green (s)       |                                                                                   | 54.0                                                                              |                                                                                   |                                                                                   | 54.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 36.0                                                                                |                                                                                     |                                                                                     | 36.0                                                                                |
| Yellow Time (s)         |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    |                                                                                     | 3.0                                                                                 |                                                                                     |                                                                                     | 3.0                                                                                 |
| All-Red Time (s)        |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                    |                                                                                     | 1.0                                                                                 |                                                                                     |                                                                                     | 1.0                                                                                 |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Total Lost Time (s)     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     | 4.0                                                                                 |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   |                                                                                   | 3.0                                                                               |                                                                                   |                                                                                   | 3.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 3.0                                                                                 |                                                                                     |                                                                                     | 3.0                                                                                 |
| Recall Mode             |                                                                                   | C-Max                                                                             |                                                                                   |                                                                                   | C-Max                                                                             |                                                                                   |                                                                                    |                                                                                     | None                                                                                |                                                                                     |                                                                                     | None                                                                                |
| Walk Time (s)           |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 24.0                                                                                |                                                                                     |                                                                                     | 24.0                                                                                |
| Flash Dont Walk (s)     |                                                                                   | 14.0                                                                              |                                                                                   |                                                                                   | 14.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 12.0                                                                                |                                                                                     |                                                                                     | 12.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   | 20                                                                                |                                                                                   |                                                                                   | 20                                                                                |                                                                                   |                                                                                    |                                                                                     | 15                                                                                  |                                                                                     |                                                                                     | 15                                                                                  |
| Act Effct Green (s)     |                                                                                   | 78.5                                                                              |                                                                                   |                                                                                   | 78.5                                                                              |                                                                                   |                                                                                    |                                                                                     | 17.7                                                                                |                                                                                     |                                                                                     | 17.7                                                                                |
| Actuated g/C Ratio      |                                                                                   | 0.78                                                                              |                                                                                   |                                                                                   | 0.78                                                                              |                                                                                   |                                                                                    |                                                                                     | 0.18                                                                                |                                                                                     |                                                                                     | 0.18                                                                                |
| v/c Ratio               |                                                                                   | 0.46                                                                              |                                                                                   |                                                                                   | 0.50                                                                              |                                                                                   |                                                                                    |                                                                                     | 0.02                                                                                |                                                                                     |                                                                                     | 0.07                                                                                |
| Control Delay           |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                   | 4.4                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     | 2.1                                                                                 |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Total Delay             |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                   | 4.4                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     | 2.1                                                                                 |
| LOS                     |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |
| Approach Delay          |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                   | 4.4                                                                               |                                                                                   |                                                                                    | 0.2                                                                                 |                                                                                     |                                                                                     | 2.1                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 42 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 5.6

Intersection LOS: A

Intersection Capacity Utilization 51.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 18: Residential/Cadboro Road & Ogilvie Road

|                                                                                            |                                                                                        |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|  Ø2 (R) |  Ø4 |
| 60 s                                                                                       | 40 s                                                                                   |
|  Ø6 (R) |  Ø8 |
| 60 s                                                                                       | 40 s                                                                                   |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

BG 2037 AM DR

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |  |                                                                                   |  |
| Traffic Volume (vph)       | 198                                                                               | 1015                                                                              | 925                                                                               | 81                                                                                | 183                                                                               | 485                                                                               |
| Future Volume (vph)        | 198                                                                               | 1015                                                                              | 925                                                                               | 81                                                                                | 183                                                                               | 485                                                                               |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Storage Length (m)         | 0.0                                                                               | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   |
| Storage Lanes              | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.986                                                                             |
| Satd. Flow (prot)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 3217                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.576                                                                             |
| Satd. Flow (perm)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 1879                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 476                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (k/h)           | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)          | 216.4                                                                             |                                                                                   | 230.9                                                                             |                                                                                   |                                                                                   | 341.9                                                                             |
| Travel Time (s)            | 13.0                                                                              |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 20.5                                                                              |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Heavy Vehicles (%)         | 5%                                                                                | 5%                                                                                | 4%                                                                                | 4%                                                                                | 6%                                                                                | 6%                                                                                |
| Adj. Flow (vph)            | 198                                                                               | 1015                                                                              | 925                                                                               | 81                                                                                | 183                                                                               | 485                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 198                                                                               | 1015                                                                              | 925                                                                               | 81                                                                                | 0                                                                                 | 668                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)            | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)             | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)         | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)        | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |
| Leading Detector (m)       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Size(m)         | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 2 Position(m)     |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |
| Detector 2 Size(m)         |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |
| Detector 2 Type            |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Turn Type                  | Prot                                                                              | Free                                                                              | NA                                                                                | pm+ov                                                                             | Perm                                                                              | NA                                                                                |
| Protected Phases           | 8                                                                                 |                                                                                   | 2                                                                                 | 8                                                                                 |                                                                                   | 6                                                                                 |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

BG 2037 AM DR

|                         |  |      |       |       |       |       |
|-------------------------|-----------------------------------------------------------------------------------|------|-------|-------|-------|-------|
| Lane Group              | WBL                                                                               | WBR  | NBT   | NBR   | SBL   | SBT   |
| Permitted Phases        | Free                                                                              |      |       | 2     | 6     |       |
| Detector Phase          | 8                                                                                 |      | 2     | 8     | 6     | 6     |
| Switch Phase            |                                                                                   |      |       |       |       |       |
| Minimum Initial (s)     | 5.0                                                                               |      | 10.0  | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 25.3                                                                              |      | 30.5  | 25.3  | 16.5  | 16.5  |
| Total Split (s)         | 35.0                                                                              |      | 55.0  | 35.0  | 55.0  | 55.0  |
| Total Split (%)         | 38.9%                                                                             |      | 61.1% | 38.9% | 61.1% | 61.1% |
| Maximum Green (s)       | 28.7                                                                              |      | 48.5  | 28.7  | 48.5  | 48.5  |
| Yellow Time (s)         | 3.3                                                                               |      | 4.2   | 3.3   | 4.2   | 4.2   |
| All-Red Time (s)        | 3.0                                                                               |      | 2.3   | 3.0   | 2.3   | 2.3   |
| Lost Time Adjust (s)    | 0.0                                                                               |      | 0.0   | 0.0   |       | 0.0   |
| Total Lost Time (s)     | 6.3                                                                               |      | 6.5   | 6.3   |       | 6.5   |
| Lead/Lag                |                                                                                   |      |       |       |       |       |
| Lead-Lag Optimize?      |                                                                                   |      |       |       |       |       |
| Vehicle Extension (s)   | 3.0                                                                               |      | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None                                                                              |      | Max   | None  | Max   | Max   |
| Walk Time (s)           | 7.0                                                                               |      | 7.0   | 7.0   |       |       |
| Flash Dont Walk (s)     | 12.0                                                                              |      | 17.0  | 12.0  |       |       |
| Pedestrian Calls (#/hr) | 0                                                                                 |      | 0     | 0     |       |       |
| Act Effect Green (s)    | 14.2                                                                              | 75.7 | 48.6  | 75.7  |       | 48.6  |
| Actuated g/C Ratio      | 0.19                                                                              | 1.00 | 0.64  | 1.00  |       | 0.64  |
| v/c Ratio               | 0.64                                                                              | 0.69 | 0.43  | 0.05  |       | 0.55  |
| Control Delay           | 38.1                                                                              | 2.7  | 8.0   | 0.1   |       | 10.5  |
| Queue Delay             | 0.0                                                                               | 0.0  | 0.0   | 0.0   |       | 0.0   |
| Total Delay             | 38.1                                                                              | 2.7  | 8.0   | 0.1   |       | 10.5  |
| LOS                     | D                                                                                 | A    | A     | A     |       | B     |
| Approach Delay          | 8.4                                                                               |      | 7.4   |       |       | 10.5  |
| Approach LOS            | A                                                                                 |      | A     |       |       | B     |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 75.7

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 8.6

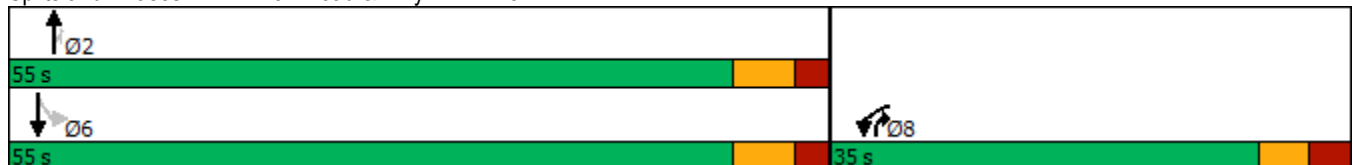
Intersection LOS: A

Intersection Capacity Utilization 74.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 22: Blair Road & Hwy 174 EB off



## 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road &amp; Ogilvie Road

BG 2037 AM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 83                                                                                | 1085                                                                              | 21                                                                                | 33                                                                                | 1264                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Future Volume (vph)        | 83                                                                                | 1085                                                                              | 21                                                                                | 33                                                                                | 1264                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 70.0                                                                              |                                                                                   | 0.0                                                                               | 15.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 35.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 1.00                                                                              |                                                                                   | 0.99                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.98                                                                                |                                                                                     |                                                                                     | 0.99                                                                                | 0.99                                                                                |
| Frt                        |                                                                                   | 0.997                                                                             |                                                                                   |                                                                                   | 0.998                                                                             |                                                                                   |                                                                                     | 0.861                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.956                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3375                                                                              | 0                                                                                 | 1695                                                                              | 3382                                                                              | 0                                                                                 | 1662                                                                                | 1471                                                                                | 0                                                                                   | 0                                                                                   | 1706                                                                                | 1517                                                                                |
| Flt Permitted              | 0.153                                                                             |                                                                                   |                                                                                   | 0.216                                                                             |                                                                                   |                                                                                   | 0.740                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.727                                                                               |                                                                                     |
| Satd. Flow (perm)          | 273                                                                               | 3375                                                                              | 0                                                                                 | 383                                                                               | 3382                                                                              | 0                                                                                 | 1290                                                                                | 1471                                                                                | 0                                                                                   | 0                                                                                   | 1282                                                                                | 1497                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 1                                                                                 |                                                                                   |                                                                                     | 26                                                                                  |                                                                                     |                                                                                     |                                                                                     | 171                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 314.1                                                                             |                                                                                   |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                     | 176.2                                                                               |                                                                                     |                                                                                     |                                                                                     | 174.1                                                                               |
| Travel Time (s)            |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     |                                                                                     | 10.4                                                                                |
| Confl. Peds. (#/hr)        | 11                                                                                |                                                                                   | 26                                                                                | 26                                                                                |                                                                                   | 11                                                                                | 4                                                                                   |                                                                                     | 14                                                                                  | 14                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 21                                                                                |                                                                                   |                                                                                   | 9                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                  | 4%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 83                                                                                | 1085                                                                              | 21                                                                                | 33                                                                                | 1264                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 83                                                                                | 1106                                                                              | 0                                                                                 | 33                                                                                | 1278                                                                              | 0                                                                                 | 57                                                                                  | 28                                                                                  | 0                                                                                   | 0                                                                                   | 27                                                                                  | 171                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road & Ogilvie Road

BG 2037 AM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                   | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase          | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              |                                                                                   | 5.0                                                                               | 10.0                                                                              |                                                                                   | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 9.7                                                                               | 33.6                                                                              |                                                                                   | 9.7                                                                               | 33.6                                                                              |                                                                                   | 40.2                                                                               | 40.2                                                                                |                                                                                     | 40.2                                                                                | 40.2                                                                                | 40.2                                                                                |
| Total Split (s)         | 13.0                                                                              | 47.0                                                                              |                                                                                   | 13.0                                                                              | 47.0                                                                              |                                                                                   | 40.0                                                                               | 40.0                                                                                |                                                                                     | 40.0                                                                                | 40.0                                                                                | 40.0                                                                                |
| Total Split (%)         | 13.0%                                                                             | 47.0%                                                                             |                                                                                   | 13.0%                                                                             | 47.0%                                                                             |                                                                                   | 40.0%                                                                              | 40.0%                                                                               |                                                                                     | 40.0%                                                                               | 40.0%                                                                               | 40.0%                                                                               |
| Maximum Green (s)       | 8.3                                                                               | 41.4                                                                              |                                                                                   | 8.3                                                                               | 41.4                                                                              |                                                                                   | 32.8                                                                               | 32.8                                                                                |                                                                                     | 32.8                                                                                | 32.8                                                                                | 32.8                                                                                |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| All-Red Time (s)        | 1.0                                                                               | 1.9                                                                               |                                                                                   | 1.0                                                                               | 1.9                                                                               |                                                                                   | 4.2                                                                                | 4.2                                                                                 |                                                                                     | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 4.7                                                                               | 5.6                                                                               |                                                                                   | 4.7                                                                               | 5.6                                                                               |                                                                                   | 7.2                                                                                | 7.2                                                                                 |                                                                                     |                                                                                     | 7.2                                                                                 | 7.2                                                                                 |
| Lead/Lag                | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                              | Lag                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               |                                                                                   | Yes                                                                               | Yes                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              | C-Max                                                                             |                                                                                   | None                                                                              | C-Max                                                                             |                                                                                   | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |
| Flash Dont Walk (s)     |                                                                                   | 13.0                                                                              |                                                                                   |                                                                                   | 13.0                                                                              |                                                                                   | 26.0                                                                               | 26.0                                                                                |                                                                                     | 26.0                                                                                | 26.0                                                                                | 26.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   | 10                                                                                |                                                                                   |                                                                                   | 10                                                                                |                                                                                   | 10                                                                                 | 10                                                                                  |                                                                                     | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Act Effct Green (s)     | 70.9                                                                              | 65.6                                                                              |                                                                                   | 68.9                                                                              | 62.9                                                                              |                                                                                   | 14.9                                                                               | 14.9                                                                                |                                                                                     |                                                                                     | 14.9                                                                                | 14.9                                                                                |
| Actuated g/C Ratio      | 0.71                                                                              | 0.66                                                                              |                                                                                   | 0.69                                                                              | 0.63                                                                              |                                                                                   | 0.15                                                                               | 0.15                                                                                |                                                                                     |                                                                                     | 0.15                                                                                | 0.15                                                                                |
| v/c Ratio               | 0.29                                                                              | 0.50                                                                              |                                                                                   | 0.10                                                                              | 0.60                                                                              |                                                                                   | 0.30                                                                               | 0.12                                                                                |                                                                                     |                                                                                     | 0.14                                                                                | 0.46                                                                                |
| Control Delay           | 8.3                                                                               | 12.7                                                                              |                                                                                   | 4.6                                                                               | 7.9                                                                               |                                                                                   | 38.9                                                                               | 13.0                                                                                |                                                                                     |                                                                                     | 34.7                                                                                | 9.0                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 8.3                                                                               | 12.7                                                                              |                                                                                   | 4.6                                                                               | 7.9                                                                               |                                                                                   | 38.9                                                                               | 13.0                                                                                |                                                                                     |                                                                                     | 34.7                                                                                | 9.0                                                                                 |
| LOS                     | A                                                                                 | B                                                                                 |                                                                                   | A                                                                                 | A                                                                                 |                                                                                   | D                                                                                  | B                                                                                   |                                                                                     |                                                                                     | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 12.4                                                                              |                                                                                   |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                    | 30.4                                                                                |                                                                                     |                                                                                     | 12.5                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    | C                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 54 (54%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 10.8

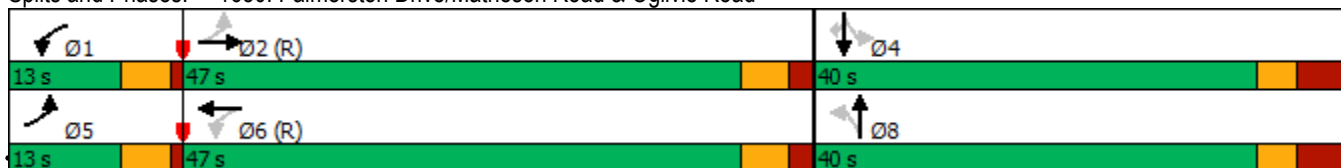
Intersection LOS: B

Intersection Capacity Utilization 80.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1630: Palmerston Drive/Matheson Road & Ogilvie Road



Synchro 11 Report

04/04/2023

### 3: Blair Road & Ogilvie Road

BG 2037 PM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 150                                                                               | 828                                                                               | 539                                                                               | 705                                                                               | 492                                                                               | 83                                                                                | 218                                                                                | 296                                                                                 | 731                                                                                 | 75                                                                                  | 761                                                                                 | 55                                                                                  |
| Future Volume (vph)        | 150                                                                               | 828                                                                               | 539                                                                               | 705                                                                               | 492                                                                               | 83                                                                                | 218                                                                                | 296                                                                                 | 731                                                                                 | 75                                                                                  | 761                                                                                 | 55                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 110.0                                                                             |                                                                                   | 0.0                                                                               | 120.0                                                                              |                                                                                     | 0.0                                                                                 | 30.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 0                                                                                 | 2                                                                                  |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 40.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                               |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.97                                                                              | 0.95                                                                              | 0.95                                                                              | 0.97                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.99                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.978                                                                             |                                                                                   |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     | 0.990                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3244                                                                              | 0                                                                                 | 3257                                                                               | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3294                                                                                | 0                                                                                   |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3244                                                                              | 0                                                                                 | 3257                                                                               | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3294                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 225                                                                               |                                                                                   | 15                                                                                |                                                                                   |                                                                                    |                                                                                     | 444                                                                                 |                                                                                     | 5                                                                                   |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                   | 396.5                                                                             |                                                                                   |                                                                                    | 239.9                                                                               |                                                                                     |                                                                                     | 411.0                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                   | 23.8                                                                              |                                                                                   |                                                                                    | 14.4                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 29                                                                                |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 84                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                 | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 150                                                                               | 828                                                                               | 539                                                                               | 705                                                                               | 492                                                                               | 83                                                                                | 218                                                                                | 296                                                                                 | 731                                                                                 | 75                                                                                  | 761                                                                                 | 55                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 150                                                                               | 828                                                                               | 539                                                                               | 705                                                                               | 575                                                                               | 0                                                                                 | 218                                                                                | 296                                                                                 | 731                                                                                 | 75                                                                                  | 816                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                    | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                  | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

### 3: Blair Road & Ogilvie Road

BG 2037 PM DR

|                         |  |       |       |       |       |     |       |       |       |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    |     | Prot  | NA    | Perm  | Prot  | NA    |     |
| Protected Phases        | 5                                                                                  | 2     |       | 1     | 6     |     | 3     | 8     |       | 7     | 4     |     |
| Permitted Phases        |                                                                                    |       | 2     |       |       |     |       |       | 8     |       |       |     |
| Detector Phase          | 5                                                                                  | 2     | 2     | 1     | 6     |     | 3     | 8     | 8     | 7     | 4     |     |
| Switch Phase            |                                                                                    |       |       |       |       |     |       |       |       |       |       |     |
| Minimum Initial (s)     | 5.0                                                                                | 10.0  | 10.0  | 5.0   | 10.0  |     | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  |     |
| Minimum Split (s)       | 11.8                                                                               | 38.6  | 38.6  | 11.8  | 38.6  |     | 11.5  | 35.5  | 35.5  | 11.5  | 35.5  |     |
| Total Split (s)         | 25.0                                                                               | 41.0  | 41.0  | 37.0  | 53.0  |     | 21.0  | 41.0  | 41.0  | 21.0  | 41.0  |     |
| Total Split (%)         | 17.9%                                                                              | 29.3% | 29.3% | 26.4% | 37.9% |     | 15.0% | 29.3% | 29.3% | 15.0% | 29.3% |     |
| Maximum Green (s)       | 18.2                                                                               | 34.4  | 34.4  | 30.2  | 46.4  |     | 14.5  | 34.5  | 34.5  | 14.5  | 34.5  |     |
| Yellow Time (s)         | 3.7                                                                                | 3.3   | 3.3   | 3.7   | 3.3   |     | 4.2   | 4.2   | 4.2   | 4.2   | 4.2   |     |
| All-Red Time (s)        | 3.1                                                                                | 3.3   | 3.3   | 3.1   | 3.3   |     | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   |     |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 6.8                                                                                | 6.6   | 6.6   | 6.8   | 6.6   |     | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |     |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   |     | Lead  | Lag   | Lag   | Lead  | Lag   |     |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   |     | Yes   | Yes   | Yes   | Yes   | Yes   |     |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |
| Recall Mode             | None                                                                               | C-Max | C-Max | None  | C-Max |     | None  | None  | None  | None  | None  |     |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   |     |       | 7.0   | 7.0   |       | 7.0   |     |
| Flash Dont Walk (s)     |                                                                                    | 25.0  | 25.0  |       | 25.0  |     |       | 22.0  | 22.0  |       | 22.0  |     |
| Pedestrian Calls (#/hr) |                                                                                    | 30    | 30    |       | 30    |     |       | 35    | 35    |       | 35    |     |
| Act Effct Green (s)     | 16.2                                                                               | 34.4  | 34.4  | 30.2  | 48.4  |     | 13.4  | 37.7  | 37.7  | 11.3  | 35.6  |     |
| Actuated g/C Ratio      | 0.12                                                                               | 0.25  | 0.25  | 0.22  | 0.35  |     | 0.10  | 0.27  | 0.27  | 0.08  | 0.25  |     |
| v/c Ratio               | 0.77                                                                               | 1.00  | 1.00  | 1.00  | 0.51  |     | 0.70  | 0.62  | 1.00  | 0.56  | 0.97  |     |
| Control Delay           | 85.3                                                                               | 84.7  | 69.8  | 89.2  | 37.7  |     | 73.6  | 52.3  | 54.4  | 77.1  | 76.0  |     |
| Queue Delay             | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay             | 85.3                                                                               | 84.7  | 69.8  | 89.2  | 37.7  |     | 73.6  | 52.3  | 54.4  | 77.1  | 76.0  |     |
| LOS                     | F                                                                                  | F     | E     | F     | D     |     | E     | D     | D     | E     | E     |     |
| Approach Delay          |                                                                                    | 79.5  |       |       | 66.1  |     |       | 57.2  |       |       | 76.1  |     |
| Approach LOS            |                                                                                    | E     |       |       | E     |     |       | E     |       |       | E     |     |

#### Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 69.8

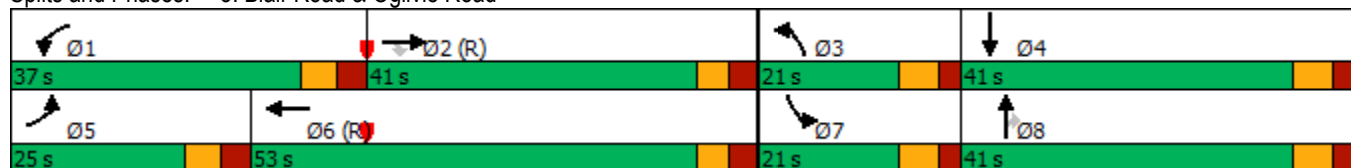
Intersection LOS: E

Intersection Capacity Utilization 98.4%

ICU Level of Service F

Analysis Period (min) 15

#### Splits and Phases: 3: Blair Road & Ogilvie Road



## 6: Blair Road &amp; 1980 Ogilvie Road/Hwy 174 WB off

BG 2037 PM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |                                                                                   |  |  |  |  |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 177                                                                               | 346                                                                                 | 1306                                                                                | 0                                                                                   | 0                                                                                   | 1802                                                                                | 172                                                                                 |
| Future Volume (vph)        | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 177                                                                               | 346                                                                                 | 1306                                                                                | 0                                                                                   | 0                                                                                   | 1802                                                                                | 172                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   | 70.0                                                                              | 60.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 50.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                   | 100.0                                                                               |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.97                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.91                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1544                                                                              | 0                                                                                 | 1381                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4871                                                                                | 1517                                                                                |
| Flt Permitted              | 0.582                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 946                                                                               | 0                                                                                 | 1381                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4871                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 26                                                                                |                                                                                   |                                                                                   | 84                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 97                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 518.9                                                                             |                                                                                   |                                                                                   | 416.4                                                                             |                                                                                   |                                                                                     | 90.2                                                                                |                                                                                     |                                                                                     | 239.9                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 31.1                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 14.4                                                                                |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 12%                                                                               | 12%                                                                               | 12%                                                                               | 2%                                                                                | 2%                                                                                | 2%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 177                                                                               | 346                                                                                 | 1306                                                                                | 0                                                                                   | 0                                                                                   | 1802                                                                                | 172                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 177                                                                               | 346                                                                                 | 1306                                                                                | 0                                                                                   | 0                                                                                   | 1802                                                                                | 172                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              |                                                                                   | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     |                                                                                     | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     |                                                                                     | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              |                                                                                   | pm+ov                                                                             | Perm                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                                | NA                                                                                  |                                                                                     |                                                                                     | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   | 8                                                                                 |                                                                                   | 5                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |

## 6: Blair Road &amp; 1980 Ogilvie Road/Hwy 174 WB off

BG 2037 PM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Permitted Phases        | 4                                                                                 |                                                                                   | 4                                                                                 | 8                                                                                 |                                                                                   | 8                                                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 6                                                                                   |
| Detector Phase          | 4                                                                                 |                                                                                   | 5                                                                                 | 8                                                                                 | 8                                                                                 | 8                                                                                 | 5                                                                                  | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   | 6                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 10.0                                                                              |                                                                                   | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 5.0                                                                                | 10.0                                                                                |                                                                                     |                                                                                     | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 16.8                                                                              |                                                                                   | 11.4                                                                              | 36.8                                                                              | 36.8                                                                              | 36.8                                                                              | 11.4                                                                               | 30.1                                                                                |                                                                                     |                                                                                     | 30.1                                                                                | 30.1                                                                                |
| Total Split (s)         | 36.0                                                                              |                                                                                   | 31.0                                                                              | 36.0                                                                              | 36.0                                                                              | 36.0                                                                              | 31.0                                                                               | 94.0                                                                                |                                                                                     |                                                                                     | 63.0                                                                                | 63.0                                                                                |
| Total Split (%)         | 27.7%                                                                             |                                                                                   | 23.8%                                                                             | 27.7%                                                                             | 27.7%                                                                             | 27.7%                                                                             | 23.8%                                                                              | 72.3%                                                                               |                                                                                     |                                                                                     | 48.5%                                                                               | 48.5%                                                                               |
| Maximum Green (s)       | 29.2                                                                              |                                                                                   | 24.6                                                                              | 29.2                                                                              | 29.2                                                                              | 29.2                                                                              | 24.6                                                                               | 87.9                                                                                |                                                                                     |                                                                                     | 56.9                                                                                | 56.9                                                                                |
| Yellow Time (s)         | 3.3                                                                               |                                                                                   | 4.2                                                                               | 3.3                                                                               | 3.3                                                                               | 3.3                                                                               | 4.2                                                                                | 4.2                                                                                 |                                                                                     |                                                                                     | 4.2                                                                                 | 4.2                                                                                 |
| All-Red Time (s)        | 3.5                                                                               |                                                                                   | 2.2                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 2.2                                                                                | 1.9                                                                                 |                                                                                     |                                                                                     | 1.9                                                                                 | 1.9                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 6.8                                                                               |                                                                                   | 6.4                                                                               | 6.8                                                                               | 6.8                                                                               | 6.8                                                                               | 6.4                                                                                | 6.1                                                                                 |                                                                                     |                                                                                     | 6.1                                                                                 | 6.1                                                                                 |
| Lead/Lag                |                                                                                   |                                                                                   | Lead                                                                              |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               |                                                                                     |                                                                                     |                                                                                     | Lag                                                                                 | Lag                                                                                 |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                |                                                                                     |                                                                                     |                                                                                     | Yes                                                                                 | Yes                                                                                 |
| Vehicle Extension (s)   | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              |                                                                                   | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                               | C-Max                                                                               |                                                                                     |                                                                                     | C-Max                                                                               | C-Max                                                                               |
| Walk Time (s)           |                                                                                   |                                                                                   |                                                                                   | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 | 7.0                                                                                 |
| Flash Dont Walk (s)     |                                                                                   |                                                                                   |                                                                                   | 23.0                                                                              | 23.0                                                                              | 23.0                                                                              |                                                                                    | 17.0                                                                                |                                                                                     |                                                                                     | 17.0                                                                                | 17.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   |                                                                                   |                                                                                   | 20                                                                                | 20                                                                                | 20                                                                                |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  | 30                                                                                  |
| Act Effct Green (s)     | 23.3                                                                              |                                                                                   | 58.6                                                                              | 23.3                                                                              | 23.3                                                                              | 23.3                                                                              | 28.5                                                                               | 93.8                                                                                |                                                                                     |                                                                                     | 58.9                                                                                | 58.9                                                                                |
| Actuated g/C Ratio      | 0.18                                                                              |                                                                                   | 0.45                                                                              | 0.18                                                                              | 0.18                                                                              | 0.18                                                                              | 0.22                                                                               | 0.72                                                                                |                                                                                     |                                                                                     | 0.45                                                                                | 0.45                                                                                |
| v/c Ratio               | 0.73                                                                              |                                                                                   | 0.89                                                                              | 0.31                                                                              | 0.47                                                                              | 0.52                                                                              | 0.50                                                                               | 0.56                                                                                |                                                                                     |                                                                                     | 0.82                                                                                | 0.23                                                                                |
| Control Delay           | 72.8                                                                              |                                                                                   | 48.9                                                                              | 46.8                                                                              | 51.0                                                                              | 28.9                                                                              | 48.4                                                                               | 10.5                                                                                |                                                                                     |                                                                                     | 35.2                                                                                | 10.8                                                                                |
| Queue Delay             | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 72.8                                                                              |                                                                                   | 48.9                                                                              | 46.8                                                                              | 51.0                                                                              | 28.9                                                                              | 48.4                                                                               | 10.5                                                                                |                                                                                     |                                                                                     | 35.2                                                                                | 10.8                                                                                |
| LOS                     | E                                                                                 |                                                                                   | D                                                                                 | D                                                                                 | D                                                                                 | C                                                                                 | D                                                                                  | B                                                                                   |                                                                                     |                                                                                     | D                                                                                   | B                                                                                   |
| Approach Delay          |                                                                                   | 53.1                                                                              |                                                                                   |                                                                                   | 40.8                                                                              |                                                                                   |                                                                                    | 18.4                                                                                |                                                                                     |                                                                                     | 33.1                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 50 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 31.6

Intersection LOS: C

Intersection Capacity Utilization 98.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: Blair Road &amp; 1980 Ogilvie Road/Hwy 174 WB off



# 9: City Park Drive/1941 Ogilvie & Ogilvie Road

BG 2037 PM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                     |  |  |  |  |  |
| Traffic Volume (vph)       | 32                                                                                | 1484                                                                              | 152                                                                               | 103                                                                               | 603                                                                               | 38                                                                                | 183                                                                                 | 10                                                                                  | 161                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Future Volume (vph)        | 32                                                                                | 1484                                                                              | 152                                                                               | 103                                                                               | 603                                                                               | 38                                                                                | 183                                                                                 | 10                                                                                  | 161                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                 |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.89                                                                              |                                                                                   | 0.87                                                                              |                                                                                   |                                                                                   | 0.73                                                                              |                                                                                     | 0.93                                                                                | 0.87                                                                                | 0.91                                                                                |                                                                                     | 0.92                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.955                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                   | 1609                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.424                                                                             |                                                                                   |                                                                                   | 0.074                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.723                                                                               |                                                                                     | 0.558                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 675                                                                               | 3390                                                                              | 1315                                                                              | 131                                                                               | 3357                                                                              | 1104                                                                              | 0                                                                                   | 1135                                                                                | 1244                                                                                | 906                                                                                 | 1784                                                                                | 1388                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 152                                                                               |                                                                                   |                                                                                   | 60                                                                                |                                                                                     |                                                                                     | 161                                                                                 |                                                                                     |                                                                                     | 99                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                     | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 145                                                                               |                                                                                   | 67                                                                                | 67                                                                                |                                                                                   | 145                                                                               | 67                                                                                  |                                                                                     | 110                                                                                 | 110                                                                                 |                                                                                     | 67                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                  | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 32                                                                                | 1484                                                                              | 152                                                                               | 103                                                                               | 603                                                                               | 38                                                                                | 183                                                                                 | 10                                                                                  | 161                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 32                                                                                | 1484                                                                              | 152                                                                               | 103                                                                               | 603                                                                               | 38                                                                                | 0                                                                                   | 193                                                                                 | 161                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 9: City Park Drive/1941 Ogilvie & Ogilvie Road

BG 2037 PM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | Perm                                                                              | NA                                                                                | Perm                                                                              | pm+pt                                                                             | NA                                                                                | Perm                                                                              | Perm                                                                               | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        |                                                                                   | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                  | 8                                                                                   | 8                                                                                   | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                               | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 35.1                                                                              | 35.1                                                                              | 35.1                                                                              | 9.0                                                                               | 35.1                                                                              | 35.1                                                                              | 33.5                                                                               | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                |
| Total Split (s)         | 46.0                                                                              | 46.0                                                                              | 46.0                                                                              | 15.0                                                                              | 61.0                                                                              | 61.0                                                                              | 34.0                                                                               | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                | 34.0                                                                                |
| Total Split (%)         | 46.0%                                                                             | 46.0%                                                                             | 46.0%                                                                             | 15.0%                                                                             | 61.0%                                                                             | 61.0%                                                                             | 34.0%                                                                              | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               | 34.0%                                                                               |
| Maximum Green (s)       | 39.9                                                                              | 39.9                                                                              | 39.9                                                                              | 11.0                                                                              | 54.9                                                                              | 54.9                                                                              | 27.5                                                                               | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                | 27.5                                                                                |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                               | 3.7                                                                               | 3.7                                                                               | 3.3                                                                                | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 |
| All-Red Time (s)        | 2.4                                                                               | 2.4                                                                               | 2.4                                                                               | 1.0                                                                               | 2.4                                                                               | 2.4                                                                               | 3.2                                                                                | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                    | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 6.1                                                                               | 6.1                                                                               | 6.1                                                                               | 4.0                                                                               | 6.1                                                                               | 6.1                                                                               |                                                                                    | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |
| Lead/Lag                | Lag                                                                               | Lag                                                                               | Lag                                                                               | Lead                                                                              |                                                                                   |                                                                                   | Lag                                                                                | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               | 2.0                                                                                | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |
| Flash Dont Walk (s)     | 22.0                                                                              | 22.0                                                                              | 22.0                                                                              |                                                                                   | 22.0                                                                              | 22.0                                                                              | 25.0                                                                               | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                |
| Pedestrian Calls (#/hr) | 35                                                                                | 35                                                                                | 35                                                                                |                                                                                   | 35                                                                                | 35                                                                                | 35                                                                                 | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  |
| Act Effct Green (s)     | 51.6                                                                              | 51.6                                                                              | 51.6                                                                              | 63.9                                                                              | 61.8                                                                              | 61.8                                                                              |                                                                                    | 22.6                                                                                | 22.6                                                                                | 22.6                                                                                | 22.6                                                                                | 22.6                                                                                |
| Actuated g/C Ratio      | 0.52                                                                              | 0.52                                                                              | 0.52                                                                              | 0.64                                                                              | 0.62                                                                              | 0.62                                                                              |                                                                                    | 0.23                                                                                | 0.23                                                                                | 0.23                                                                                | 0.23                                                                                | 0.23                                                                                |
| v/c Ratio               | 0.09                                                                              | 0.85                                                                              | 0.20                                                                              | 0.49                                                                              | 0.29                                                                              | 0.05                                                                              |                                                                                    | 0.75                                                                                | 0.40                                                                                | 0.38                                                                                | 0.05                                                                                | 0.19                                                                                |
| Control Delay           | 9.1                                                                               | 20.7                                                                              | 1.0                                                                               | 20.3                                                                              | 10.6                                                                              | 1.4                                                                               |                                                                                    | 53.9                                                                                | 7.8                                                                                 | 36.6                                                                                | 27.6                                                                                | 4.5                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                    | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 9.1                                                                               | 20.7                                                                              | 1.0                                                                               | 20.3                                                                              | 10.6                                                                              | 1.4                                                                               |                                                                                    | 53.9                                                                                | 7.8                                                                                 | 36.6                                                                                | 27.6                                                                                | 4.5                                                                                 |
| LOS                     | A                                                                                 | C                                                                                 | A                                                                                 | C                                                                                 | B                                                                                 | A                                                                                 |                                                                                    | D                                                                                   | A                                                                                   | D                                                                                   | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 18.7                                                                              |                                                                                   |                                                                                   | 11.5                                                                              |                                                                                   |                                                                                    | 32.9                                                                                |                                                                                     |                                                                                     | 21.5                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 30 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 18.8

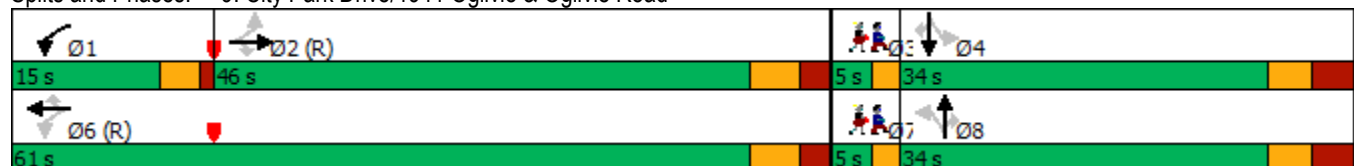
Intersection LOS: B

Intersection Capacity Utilization 102.6%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

## 12: 1900 Ogilvie Road/1929 Ogilvie Road &amp; Ogilvie Road

BG 2037 PM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                  | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Future Volume (vph)        | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                  | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 60.0                                                                              |                                                                                   | 80.0                                                                              | 90.0                                                                              |                                                                                   | 0.0                                                                               | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 20.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.953                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3345                                                                              | 0                                                                                 | 1695                                                                                | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1700                                                                                | 1517                                                                                |
| Flt Permitted              | 0.289                                                                             |                                                                                   |                                                                                   | 0.131                                                                             |                                                                                   |                                                                                   | 0.669                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.708                                                                               |                                                                                     |
| Satd. Flow (perm)          | 516                                                                               | 3390                                                                              | 1517                                                                              | 231                                                                               | 3345                                                                              | 0                                                                                 | 1194                                                                                | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1263                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 66                                                                                |                                                                                   | 5                                                                                 |                                                                                   |                                                                                     | 28                                                                                  |                                                                                     |                                                                                     |                                                                                     | 132                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                     | 86.0                                                                                |                                                                                     |                                                                                     |                                                                                     | 56.6                                                                                |
| Travel Time (s)            |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                     | 5.2                                                                                 |                                                                                     |                                                                                     |                                                                                     | 3.4                                                                                 |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 2%                                                                                | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                  | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 885                                                                               | 0                                                                                 | 47                                                                                  | 31                                                                                  | 0                                                                                   | 0                                                                                   | 138                                                                                 | 132                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     |                                                                                     | 3.7                                                                                 |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     |                                                                                     | 0.0                                                                                 |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     |                                                                                     | 4.9                                                                                 |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     |                                                                                     | 28.7                                                                                |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     |                                                                                     | 1.8                                                                                 |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     |                                                                                     | Cl+Ex                                                                               |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     |                                                                                     | 0.0                                                                                 |
| Turn Type                  | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                                | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     | 4                                                                                   |

# 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

BG 2037 PM DR

|                         | ↖     | →     | ↘     | ↙     | ←     | ↖   | ↙     | ↑     | ↗   | ↘     | ↓     | ↙     |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
| Permitted Phases        | 2     |       | 2     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 6     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 29.9  | 29.9  | 29.9  | 29.9  | 29.9  |     | 36.7  | 36.7  |     | 36.7  | 36.7  | 36.7  |
| Total Split (s)         | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  |     | 37.0  | 37.0  |     | 37.0  | 37.0  | 37.0  |
| Total Split (%)         | 63.0% | 63.0% | 63.0% | 63.0% | 63.0% |     | 37.0% | 37.0% |     | 37.0% | 37.0% | 37.0% |
| Maximum Green (s)       | 57.1  | 57.1  | 57.1  | 57.1  | 57.1  |     | 30.3  | 30.3  |     | 30.3  | 30.3  | 30.3  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   |     | 3.3   | 3.3   |     | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   |     | 3.4   | 3.4   |     | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   |     | 6.7   | 6.7   |     |       | 6.7   | 6.7   |
| Lead/Lag                |       |       |       |       |       |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | C-Max | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |     | 23.0  | 23.0  |     | 23.0  | 23.0  | 23.0  |
| Pedestrian Calls (#/hr) | 20    | 20    | 20    | 20    | 20    |     | 30    | 30    |     | 30    | 30    | 30    |
| Act Effct Green (s)     | 64.7  | 64.7  | 64.7  | 64.7  | 64.7  |     | 22.7  | 22.7  |     |       | 22.7  | 22.7  |
| Actuated g/C Ratio      | 0.65  | 0.65  | 0.65  | 0.65  | 0.65  |     | 0.23  | 0.23  |     |       | 0.23  | 0.23  |
| v/c Ratio               | 0.13  | 0.65  | 0.07  | 0.21  | 0.41  |     | 0.17  | 0.08  |     |       | 0.48  | 0.30  |
| Control Delay           | 5.9   | 8.4   | 0.7   | 10.5  | 6.8   |     | 28.9  | 11.0  |     |       | 37.2  | 6.6   |
| Queue Delay             | 0.0   | 0.1   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 5.9   | 8.5   | 0.7   | 10.5  | 6.8   |     | 28.9  | 11.0  |     |       | 37.2  | 6.6   |
| LOS                     | A     | A     | A     | B     | A     |     | C     | B     |     |       | D     | A     |
| Approach Delay          |       | 8.1   |       |       | 7.0   |     |       | 21.8  |     |       | 22.2  |       |
| Approach LOS            |       | A     |       |       | A     |     |       | C     |     |       | C     |       |

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 9.5

Intersection LOS: A

Intersection Capacity Utilization 66.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road



# 15: City Park Drive/Bathgate Drive & Ogilvie Road

BG 2037 PM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)       | 207                                                                               | 1061                                                                              | 165                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 120                                                                                | 69                                                                                  | 26                                                                                  | 140                                                                                 | 47                                                                                  | 159                                                                                 |
| Future Volume (vph)        | 207                                                                               | 1061                                                                              | 165                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 120                                                                                | 69                                                                                  | 26                                                                                  | 140                                                                                 | 47                                                                                  | 159                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 40.0                                                                              | 45.0                                                                              |                                                                                   | 70.0                                                                              | 30.0                                                                               |                                                                                     | 0.0                                                                                 | 20.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                  |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                               |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.97                                                                              |                                                                                   | 0.90                                                                              |                                                                                   |                                                                                   | 0.83                                                                              | 0.98                                                                               | 0.99                                                                                |                                                                                     | 0.98                                                                                | 0.97                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    | 0.959                                                                               |                                                                                     |                                                                                     | 0.884                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1631                                                                               | 1632                                                                                | 0                                                                                   | 1647                                                                                | 1487                                                                                | 0                                                                                   |
| Flt Permitted              | 0.226                                                                             |                                                                                   |                                                                                   | 0.245                                                                             |                                                                                   |                                                                                   | 0.539                                                                              |                                                                                     |                                                                                     | 0.695                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 387                                                                               | 3357                                                                              | 1349                                                                              | 433                                                                               | 3357                                                                              | 1248                                                                              | 907                                                                                | 1632                                                                                | 0                                                                                   | 1182                                                                                | 1487                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 121                                                                               |                                                                                   |                                                                                   | 121                                                                               |                                                                                    | 20                                                                                  |                                                                                     |                                                                                     | 159                                                                                 |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                    | 345.6                                                                               |                                                                                     |                                                                                     | 177.6                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                    | 20.7                                                                                |                                                                                     |                                                                                     | 10.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 73                                                                                |                                                                                   | 40                                                                                | 40                                                                                |                                                                                   | 73                                                                                | 27                                                                                 |                                                                                     | 21                                                                                  | 21                                                                                  |                                                                                     | 27                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 6%                                                                                 | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 207                                                                               | 1061                                                                              | 165                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 120                                                                                | 69                                                                                  | 26                                                                                  | 140                                                                                 | 47                                                                                  | 159                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 207                                                                               | 1061                                                                              | 165                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 120                                                                                | 95                                                                                  | 0                                                                                   | 140                                                                                 | 206                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 15: City Park Drive/Bathgate Drive & Ogilvie Road

BG 2037 PM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | pm+pt                                                                             | NA                                                                                | Perm                                                                              | pm+pt                                                                             | NA                                                                                | Perm                                                                              | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 37.4                                                                               | 37.4                                                                                |                                                                                     | 37.4                                                                                | 37.4                                                                                |                                                                                     |
| Total Split (s)         | 20.0                                                                              | 37.0                                                                              | 37.0                                                                              | 20.0                                                                              | 37.0                                                                              | 37.0                                                                              | 38.0                                                                               | 38.0                                                                                |                                                                                     | 38.0                                                                                | 38.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 37.0%                                                                             | 37.0%                                                                             | 20.0%                                                                             | 37.0%                                                                             | 37.0%                                                                             | 38.0%                                                                              | 38.0%                                                                               |                                                                                     | 38.0%                                                                               | 38.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 15.3                                                                              | 31.0                                                                              | 31.0                                                                              | 15.3                                                                              | 31.0                                                                              | 31.0                                                                              | 30.6                                                                               | 30.6                                                                                |                                                                                     | 30.6                                                                                | 30.6                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 4.4                                                                                | 4.4                                                                                 |                                                                                     | 4.4                                                                                 | 4.4                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 7.4                                                                                | 7.4                                                                                 |                                                                                     | 7.4                                                                                 | 7.4                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                | Lag                                                                                 |                                                                                     | Lag                                                                                 | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              | 28.0                                                                               | 28.0                                                                                |                                                                                     | 28.0                                                                                | 28.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   | 30                                                                                | 30                                                                                | 20                                                                                 | 20                                                                                  |                                                                                     | 20                                                                                  | 20                                                                                  |                                                                                     |
| Act Effct Green (s)     | 62.6                                                                              | 59.1                                                                              | 59.1                                                                              | 52.6                                                                              | 45.4                                                                              | 45.4                                                                              | 20.3                                                                               | 20.3                                                                                |                                                                                     | 20.3                                                                                | 20.3                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.63                                                                              | 0.59                                                                              | 0.59                                                                              | 0.53                                                                              | 0.45                                                                              | 0.45                                                                              | 0.20                                                                               | 0.20                                                                                |                                                                                     | 0.20                                                                                | 0.20                                                                                |                                                                                     |
| v/c Ratio               | 0.54                                                                              | 0.54                                                                              | 0.20                                                                              | 0.04                                                                              | 0.55                                                                              | 0.17                                                                              | 0.66                                                                               | 0.27                                                                                |                                                                                     | 0.59                                                                                | 0.48                                                                                |                                                                                     |
| Control Delay           | 20.9                                                                              | 14.6                                                                              | 7.0                                                                               | 8.7                                                                               | 16.5                                                                              | 2.0                                                                               | 51.3                                                                               | 25.5                                                                                |                                                                                     | 44.1                                                                                | 12.1                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 20.9                                                                              | 14.6                                                                              | 7.0                                                                               | 8.7                                                                               | 16.5                                                                              | 2.0                                                                               | 51.3                                                                               | 25.5                                                                                |                                                                                     | 44.1                                                                                | 12.1                                                                                |                                                                                     |
| LOS                     | C                                                                                 | B                                                                                 | A                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | D                                                                                  | C                                                                                   |                                                                                     | D                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 14.6                                                                              |                                                                                   |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                    | 39.9                                                                                |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | D                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 19 (19%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 17.7

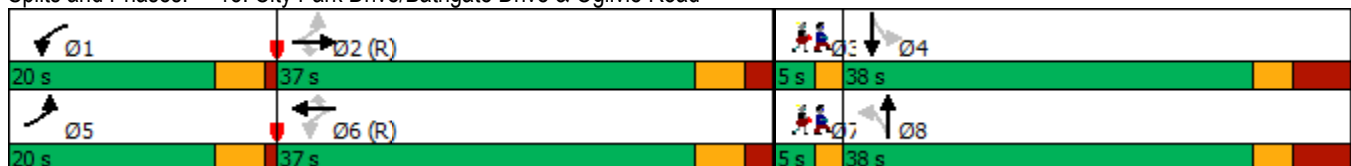
Intersection LOS: B

Intersection Capacity Utilization 87.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: City Park Drive/Bathgate Drive & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | Ped  | Ped  |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 20   | 20   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

## 18: Residential/Cadboro Road &amp; Ogilvie Road

BG 2037 PM DR

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |                                                                                     |  |                                                                                     |                                                                                     |  |
| Traffic Volume (vph)       | 0                                                                                 | 1833                                                                              | 14                                                                                | 0                                                                                 | 1222                                                                              | 70                                                                                | 0                                                                                  | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Future Volume (vph)        | 0                                                                                 | 1833                                                                              | 14                                                                                | 0                                                                                 | 1222                                                                              | 70                                                                                | 0                                                                                  | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Fr't                       |                                                                                   | 0.999                                                                             |                                                                                   |                                                                                   | 0.992                                                                             |                                                                                   |                                                                                    |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     | 0.865                                                                               |
| Flt Protected              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3363                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3363                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   | 9                                                                                 |                                                                                   |                                                                                    |                                                                                     | 33                                                                                  |                                                                                     |                                                                                     | 53                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                    | 90.1                                                                                |                                                                                     |                                                                                     | 116.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                    | 5.4                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj. Flow (vph)            | 0                                                                                 | 1833                                                                              | 14                                                                                | 0                                                                                 | 1222                                                                              | 70                                                                                | 0                                                                                  | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 1847                                                                              | 0                                                                                 | 0                                                                                 | 1292                                                                              | 0                                                                                 | 0                                                                                  | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                    | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 97                                                                                |                                                                                   | 97                                                                                | 97                                                                                |                                                                                   | 97                                                                                | 97                                                                                 |                                                                                     | 97                                                                                  | 97                                                                                  |                                                                                     | 97                                                                                  |
| Number of Detectors        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                    |                                                                                     | 1                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Detector Template          |                                                                                   | Thru                                                                              |                                                                                   |                                                                                   | Thru                                                                              |                                                                                   |                                                                                    |                                                                                     | Right                                                                               |                                                                                     |                                                                                     | Right                                                                               |
| Leading Detector (m)       |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Trailing Detector (m)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Position(m)     |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                    |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Detector 1 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Queue (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Delay (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type                  |                                                                                   | NA                                                                                |                                                                                   |                                                                                   | NA                                                                                |                                                                                   |                                                                                    |                                                                                     | Perm                                                                                |                                                                                     |                                                                                     | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Permitted Phases           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Detector Phase             |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |

# 18: Residential/Cadboro Road & Ogilvie Road

BG 2037 PM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Minimum Split (s)       |                                                                                   | 35.0                                                                              |                                                                                   |                                                                                   | 35.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 40.0                                                                                |                                                                                     |                                                                                     | 40.0                                                                                |
| Total Split (s)         |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 40.0                                                                                |                                                                                     |                                                                                     | 40.0                                                                                |
| Total Split (%)         |                                                                                   | 60.0%                                                                             |                                                                                   |                                                                                   | 60.0%                                                                             |                                                                                   |                                                                                    |                                                                                     | 40.0%                                                                               |                                                                                     |                                                                                     | 40.0%                                                                               |
| Maximum Green (s)       |                                                                                   | 54.0                                                                              |                                                                                   |                                                                                   | 54.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 36.0                                                                                |                                                                                     |                                                                                     | 36.0                                                                                |
| Yellow Time (s)         |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    |                                                                                     | 3.0                                                                                 |                                                                                     |                                                                                     | 3.0                                                                                 |
| All-Red Time (s)        |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                    |                                                                                     | 1.0                                                                                 |                                                                                     |                                                                                     | 1.0                                                                                 |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Total Lost Time (s)     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     | 4.0                                                                                 |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   |                                                                                   | 3.0                                                                               |                                                                                   |                                                                                   | 3.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 3.0                                                                                 |                                                                                     |                                                                                     | 3.0                                                                                 |
| Recall Mode             |                                                                                   | C-Max                                                                             |                                                                                   |                                                                                   | C-Max                                                                             |                                                                                   |                                                                                    |                                                                                     | None                                                                                |                                                                                     |                                                                                     | None                                                                                |
| Walk Time (s)           |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 24.0                                                                                |                                                                                     |                                                                                     | 24.0                                                                                |
| Flash Dont Walk (s)     |                                                                                   | 14.0                                                                              |                                                                                   |                                                                                   | 14.0                                                                              |                                                                                   |                                                                                    |                                                                                     | 12.0                                                                                |                                                                                     |                                                                                     | 12.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    |                                                                                     | 20                                                                                  |                                                                                     |                                                                                     | 20                                                                                  |
| Act Effct Green (s)     |                                                                                   | 74.7                                                                              |                                                                                   |                                                                                   | 74.7                                                                              |                                                                                   |                                                                                    |                                                                                     | 18.4                                                                                |                                                                                     |                                                                                     | 18.4                                                                                |
| Actuated g/C Ratio      |                                                                                   | 0.75                                                                              |                                                                                   |                                                                                   | 0.75                                                                              |                                                                                   |                                                                                    |                                                                                     | 0.18                                                                                |                                                                                     |                                                                                     | 0.18                                                                                |
| v/c Ratio               |                                                                                   | 0.73                                                                              |                                                                                   |                                                                                   | 0.51                                                                              |                                                                                   |                                                                                    |                                                                                     | 0.00                                                                                |                                                                                     |                                                                                     | 0.30                                                                                |
| Control Delay           |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 16.3                                                                                |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Total Delay             |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                    |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 16.3                                                                                |
| LOS                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |
| Approach Delay          |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 16.3                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 4 (4%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 13.0

Intersection LOS: B

Intersection Capacity Utilization 66.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 18: Residential/Cadboro Road & Ogilvie Road

|                                                                                     |        |                                                                                     |    |
|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|----|
|  | Ø2 (R) |  | Ø4 |
| 60 s                                                                                |        | 40 s                                                                                |    |
|  | Ø6 (R) |  | Ø8 |
| 60 s                                                                                |        | 40 s                                                                                |    |

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |  |                                                                                   |  |
| Traffic Volume (vph)       | 237                                                                               | 981                                                                               | 834                                                                               | 189                                                                               | 488                                                                               | 1019                                                                              |
| Future Volume (vph)        | 237                                                                               | 981                                                                               | 834                                                                               | 189                                                                               | 488                                                                               | 1019                                                                              |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Storage Length (m)         | 0.0                                                                               | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   |
| Storage Lanes              | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.984                                                                             |
| Satd. Flow (prot)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 3210                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.521                                                                             |
| Satd. Flow (perm)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 1700                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 584                                                                               |                                                                                   | 189                                                                               |                                                                                   |                                                                                   |
| Link Speed (k/h)           | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)          | 216.4                                                                             |                                                                                   | 230.9                                                                             |                                                                                   |                                                                                   | 341.9                                                                             |
| Travel Time (s)            | 13.0                                                                              |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 20.5                                                                              |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Heavy Vehicles (%)         | 5%                                                                                | 5%                                                                                | 4%                                                                                | 4%                                                                                | 6%                                                                                | 6%                                                                                |
| Adj. Flow (vph)            | 237                                                                               | 981                                                                               | 834                                                                               | 189                                                                               | 488                                                                               | 1019                                                                              |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 237                                                                               | 981                                                                               | 834                                                                               | 189                                                                               | 0                                                                                 | 1507                                                                              |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)            | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)             | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)         | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)        | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |
| Leading Detector (m)       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Size(m)         | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 2 Position(m)     |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |
| Detector 2 Size(m)         |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |
| Detector 2 Type            |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Turn Type                  | Prot                                                                              | Free                                                                              | NA                                                                                | pm+ov                                                                             | pm+pt                                                                             | NA                                                                                |
| Protected Phases           | 8                                                                                 |                                                                                   | 2                                                                                 | 8                                                                                 | 1                                                                                 | 6                                                                                 |

# 22: Blair Road & Hwy 174 EB off

BG 2037 PM DR

|                         |   |       |  |  |  |  |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group              | WBL                                                                                                                                                                 | WBR   | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Permitted Phases        | Free                                                                                                                                                                |       | 2                                                                                 |                                                                                   | 6                                                                                 |                                                                                   |
| Detector Phase          | 8                                                                                                                                                                   |       | 2                                                                                 | 8                                                                                 | 1                                                                                 | 6                                                                                 |
| Switch Phase            |                                                                                                                                                                     |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Minimum Initial (s)     | 5.0                                                                                                                                                                 |       | 10.0                                                                              | 5.0                                                                               | 5.0                                                                               | 1.0                                                                               |
| Minimum Split (s)       | 25.3                                                                                                                                                                |       | 30.5                                                                              | 25.3                                                                              | 11.0                                                                              | 30.5                                                                              |
| Total Split (s)         | 30.0                                                                                                                                                                |       | 52.0                                                                              | 30.0                                                                              | 28.0                                                                              | 80.0                                                                              |
| Total Split (%)         | 27.3%                                                                                                                                                               |       | 47.3%                                                                             | 27.3%                                                                             | 25.5%                                                                             | 72.7%                                                                             |
| Maximum Green (s)       | 23.7                                                                                                                                                                |       | 45.5                                                                              | 23.7                                                                              | 22.0                                                                              | 73.5                                                                              |
| Yellow Time (s)         | 3.3                                                                                                                                                                 |       | 4.2                                                                               | 3.3                                                                               | 4.2                                                                               | 4.2                                                                               |
| All-Red Time (s)        | 3.0                                                                                                                                                                 |       | 2.3                                                                               | 3.0                                                                               | 1.8                                                                               | 2.3                                                                               |
| Lost Time Adjust (s)    | 0.0                                                                                                                                                                 |       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               |
| Total Lost Time (s)     | 6.3                                                                                                                                                                 |       | 6.5                                                                               | 6.3                                                                               |                                                                                   | 6.5                                                                               |
| Lead/Lag                |                                                                                                                                                                     |       | Lag                                                                               |                                                                                   | Lead                                                                              |                                                                                   |
| Lead-Lag Optimize?      |                                                                                                                                                                     |       | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |
| Vehicle Extension (s)   | 3.0                                                                                                                                                                 |       | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |
| Recall Mode             | None                                                                                                                                                                |       | C-Max                                                                             | None                                                                              | Max                                                                               | C-Max                                                                             |
| Walk Time (s)           | 7.0                                                                                                                                                                 |       | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               |
| Flash Dont Walk (s)     | 12.0                                                                                                                                                                |       | 17.0                                                                              | 12.0                                                                              |                                                                                   | 17.0                                                                              |
| Pedestrian Calls (#/hr) | 0                                                                                                                                                                   |       | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 |
| Act Effect Green (s)    | 20.0                                                                                                                                                                | 110.0 | 45.5                                                                              | 72.0                                                                              |                                                                                   | 77.2                                                                              |
| Actuated g/C Ratio      | 0.18                                                                                                                                                                | 1.00  | 0.41                                                                              | 0.65                                                                              |                                                                                   | 0.70                                                                              |
| v/c Ratio               | 0.80                                                                                                                                                                | 0.67  | 0.61                                                                              | 0.18                                                                              |                                                                                   | 0.98                                                                              |
| Control Delay           | 61.9                                                                                                                                                                | 2.4   | 27.6                                                                              | 1.2                                                                               |                                                                                   | 32.2                                                                              |
| Queue Delay             | 0.0                                                                                                                                                                 | 0.0   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               |
| Total Delay             | 61.9                                                                                                                                                                | 2.4   | 27.6                                                                              | 1.2                                                                               |                                                                                   | 32.2                                                                              |
| LOS                     | E                                                                                                                                                                   | A     | C                                                                                 | A                                                                                 |                                                                                   | C                                                                                 |
| Approach Delay          | 14.0                                                                                                                                                                |       | 22.7                                                                              |                                                                                   |                                                                                   | 32.2                                                                              |
| Approach LOS            | B                                                                                                                                                                   |       | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |

## Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 23.7

Intersection LOS: C

Intersection Capacity Utilization 99.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 22: Blair Road & Hwy 174 EB off



## 1630: Palmerston Drive/Matheson Road &amp; Ogilvie Road

BG 2037 PM DR

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 188                                                                               | 1711                                                                              | 61                                                                                | 94                                                                                | 1336                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Future Volume (vph)        | 188                                                                               | 1711                                                                              | 61                                                                                | 94                                                                                | 1336                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 70.0                                                                              |                                                                                   | 0.0                                                                               | 15.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 35.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                                | 0.98                                                                                |                                                                                     |                                                                                     | 0.99                                                                                | 0.99                                                                                |
| Frt                        |                                                                                   | 0.995                                                                             |                                                                                   |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                     | 0.864                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.958                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3362                                                                              | 0                                                                                 | 1695                                                                              | 3369                                                                              | 0                                                                                 | 1662                                                                                | 1476                                                                                | 0                                                                                   | 0                                                                                   | 1709                                                                                | 1517                                                                                |
| Flt Permitted              | 0.129                                                                             |                                                                                   |                                                                                   | 0.072                                                                             |                                                                                   |                                                                                   | 0.736                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.721                                                                               |                                                                                     |
| Satd. Flow (perm)          | 230                                                                               | 3362                                                                              | 0                                                                                 | 128                                                                               | 3369                                                                              | 0                                                                                 | 1267                                                                                | 1476                                                                                | 0                                                                                   | 0                                                                                   | 1274                                                                                | 1497                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 3                                                                                 |                                                                                   |                                                                                     | 39                                                                                  |                                                                                     |                                                                                     |                                                                                     | 96                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 314.1                                                                             |                                                                                   |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                     | 176.2                                                                               |                                                                                     |                                                                                     |                                                                                     | 174.1                                                                               |
| Travel Time (s)            |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     |                                                                                     | 10.4                                                                                |
| Confl. Peds. (#/hr)        | 24                                                                                |                                                                                   | 34                                                                                | 34                                                                                |                                                                                   | 24                                                                                | 16                                                                                  |                                                                                     | 11                                                                                  | 11                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 22                                                                                |                                                                                     |                                                                                     | 3                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                  | 4%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 188                                                                               | 1711                                                                              | 61                                                                                | 94                                                                                | 1336                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 188                                                                               | 1772                                                                              | 0                                                                                 | 94                                                                                | 1374                                                                              | 0                                                                                 | 52                                                                                  | 43                                                                                  | 0                                                                                   | 0                                                                                   | 33                                                                                  | 96                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 1630: Palmerston Drive/Matheson Road & Ogilvie Road

BG 2037 PM DR

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                   | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase          | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              |                                                                                   | 5.0                                                                               | 10.0                                                                              |                                                                                   | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 9.7                                                                               | 33.6                                                                              |                                                                                   | 9.7                                                                               | 33.6                                                                              |                                                                                   | 40.2                                                                               | 40.2                                                                                |                                                                                     | 40.2                                                                                | 40.2                                                                                | 40.2                                                                                |
| Total Split (s)         | 15.0                                                                              | 65.0                                                                              |                                                                                   | 15.0                                                                              | 65.0                                                                              |                                                                                   | 40.0                                                                               | 40.0                                                                                |                                                                                     | 40.0                                                                                | 40.0                                                                                | 40.0                                                                                |
| Total Split (%)         | 12.5%                                                                             | 54.2%                                                                             |                                                                                   | 12.5%                                                                             | 54.2%                                                                             |                                                                                   | 33.3%                                                                              | 33.3%                                                                               |                                                                                     | 33.3%                                                                               | 33.3%                                                                               | 33.3%                                                                               |
| Maximum Green (s)       | 10.3                                                                              | 59.4                                                                              |                                                                                   | 10.3                                                                              | 59.4                                                                              |                                                                                   | 32.8                                                                               | 32.8                                                                                |                                                                                     | 32.8                                                                                | 32.8                                                                                | 32.8                                                                                |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| All-Red Time (s)        | 1.0                                                                               | 1.9                                                                               |                                                                                   | 1.0                                                                               | 1.9                                                                               |                                                                                   | 4.2                                                                                | 4.2                                                                                 |                                                                                     | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 4.7                                                                               | 5.6                                                                               |                                                                                   | 4.7                                                                               | 5.6                                                                               |                                                                                   | 7.2                                                                                | 7.2                                                                                 |                                                                                     |                                                                                     | 7.2                                                                                 | 7.2                                                                                 |
| Lead/Lag                | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                              | Lag                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               |                                                                                   | Yes                                                                               | Yes                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              | C-Max                                                                             |                                                                                   | None                                                                              | C-Max                                                                             |                                                                                   | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |
| Flash Dont Walk (s)     |                                                                                   | 13.0                                                                              |                                                                                   |                                                                                   | 13.0                                                                              |                                                                                   | 26.0                                                                               | 26.0                                                                                |                                                                                     | 26.0                                                                                | 26.0                                                                                | 26.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   | 10                                                                                 | 10                                                                                  |                                                                                     | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Act Effct Green (s)     | 91.5                                                                              | 79.5                                                                              |                                                                                   | 85.0                                                                              | 76.2                                                                              |                                                                                   | 15.1                                                                               | 15.1                                                                                |                                                                                     |                                                                                     | 15.1                                                                                | 15.1                                                                                |
| Actuated g/C Ratio      | 0.76                                                                              | 0.66                                                                              |                                                                                   | 0.71                                                                              | 0.64                                                                              |                                                                                   | 0.13                                                                               | 0.13                                                                                |                                                                                     |                                                                                     | 0.13                                                                                | 0.13                                                                                |
| v/c Ratio               | 0.60                                                                              | 0.80                                                                              |                                                                                   | 0.48                                                                              | 0.64                                                                              |                                                                                   | 0.33                                                                               | 0.20                                                                                |                                                                                     |                                                                                     | 0.21                                                                                | 0.35                                                                                |
| Control Delay           | 16.9                                                                              | 19.9                                                                              |                                                                                   | 19.8                                                                              | 17.0                                                                              |                                                                                   | 50.3                                                                               | 15.6                                                                                |                                                                                     |                                                                                     | 46.4                                                                                | 11.2                                                                                |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 16.9                                                                              | 19.9                                                                              |                                                                                   | 19.8                                                                              | 17.0                                                                              |                                                                                   | 50.3                                                                               | 15.6                                                                                |                                                                                     |                                                                                     | 46.4                                                                                | 11.2                                                                                |
| LOS                     | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | D                                                                                  | B                                                                                   |                                                                                     |                                                                                     | D                                                                                   | B                                                                                   |
| Approach Delay          |                                                                                   | 19.6                                                                              |                                                                                   |                                                                                   | 17.2                                                                              |                                                                                   |                                                                                    | 34.6                                                                                |                                                                                     |                                                                                     | 20.2                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.1

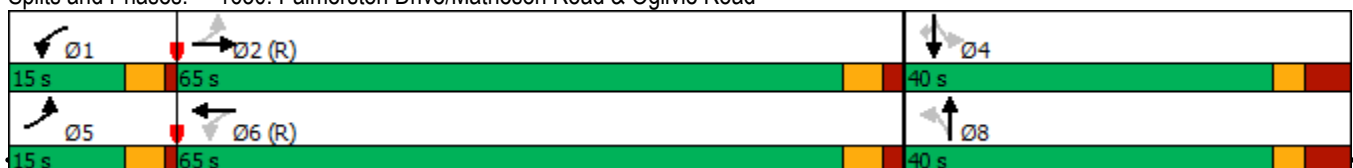
Intersection LOS: B

Intersection Capacity Utilization 87.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1630: Palmerston Drive/Matheson Road & Ogilvie Road



Synchro 11 Report

04/04/2023

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

Tot 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 108                                                                               | 456                                                                               | 265                                                                               | 644                                                                               | 739                                                                               | 50                                                                                | 643                                                                                | 663                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 114                                                                                 |
| Future Volume (vph)        | 108                                                                               | 456                                                                               | 265                                                                               | 644                                                                               | 739                                                                               | 50                                                                                | 643                                                                                | 663                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 114                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 110.0                                                                             |                                                                                   | 0.0                                                                               | 120.0                                                                              |                                                                                     | 0.0                                                                                 | 30.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 0                                                                                 | 2                                                                                  |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 40.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                               |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.97                                                                              | 0.95                                                                              | 0.95                                                                              | 0.97                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.99                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.990                                                                             |                                                                                   |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     | 0.962                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3307                                                                              | 0                                                                                 | 3257                                                                               | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3186                                                                                | 0                                                                                   |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3307                                                                              | 0                                                                                 | 3257                                                                               | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3186                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 265                                                                               |                                                                                   | 5                                                                                 |                                                                                   |                                                                                    |                                                                                     | 421                                                                                 |                                                                                     | 31                                                                                  |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                   | 396.5                                                                             |                                                                                   |                                                                                    | 239.9                                                                               |                                                                                     |                                                                                     | 411.0                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                   | 23.8                                                                              |                                                                                   |                                                                                    | 14.4                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 25                                                                                |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 27                                                                                  |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 3                                                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 3                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                 | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 108                                                                               | 456                                                                               | 265                                                                               | 644                                                                               | 739                                                                               | 50                                                                                | 643                                                                                | 663                                                                                 | 624                                                                                 | 69                                                                                  | 334                                                                                 | 114                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 108                                                                               | 456                                                                               | 265                                                                               | 644                                                                               | 789                                                                               | 0                                                                                 | 643                                                                                | 663                                                                                 | 624                                                                                 | 69                                                                                  | 448                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                    | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                  | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

Tot 2037 AM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                |                                                                                   | Prot                                                                               | NA                                                                                  | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   | 3                                                                                  | 8                                                                                   |                                                                                     | 7                                                                                   | 4                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 |                                                                                   | 3                                                                                  | 8                                                                                   | 8                                                                                   | 7                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              |                                                                                   | 5.0                                                                                | 10.0                                                                                | 10.0                                                                                | 5.0                                                                                 | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 11.8                                                                              | 38.6                                                                              | 38.6                                                                              | 11.8                                                                              | 38.6                                                                              |                                                                                   | 11.5                                                                               | 35.5                                                                                | 35.5                                                                                | 11.5                                                                                | 35.5                                                                                |                                                                                     |
| Total Split (s)         | 28.0                                                                              | 39.0                                                                              | 39.0                                                                              | 28.0                                                                              | 39.0                                                                              |                                                                                   | 36.0                                                                               | 58.0                                                                                | 58.0                                                                                | 15.0                                                                                | 37.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 27.9%                                                                             | 27.9%                                                                             | 20.0%                                                                             | 27.9%                                                                             |                                                                                   | 25.7%                                                                              | 41.4%                                                                               | 41.4%                                                                               | 10.7%                                                                               | 26.4%                                                                               |                                                                                     |
| Maximum Green (s)       | 21.2                                                                              | 32.4                                                                              | 32.4                                                                              | 21.2                                                                              | 32.4                                                                              |                                                                                   | 29.5                                                                               | 51.5                                                                                | 51.5                                                                                | 8.5                                                                                 | 30.5                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.3                                                                               | 3.3                                                                               | 3.7                                                                               | 3.3                                                                               |                                                                                   | 4.2                                                                                | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 | 4.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 3.1                                                                               | 3.3                                                                               | 3.3                                                                               | 3.1                                                                               | 3.3                                                                               |                                                                                   | 2.3                                                                                | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 | 2.3                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 6.8                                                                               | 6.6                                                                               | 6.6                                                                               | 6.8                                                                               | 6.6                                                                               |                                                                                   | 6.5                                                                                | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                               | Lag                                                                                 | Lag                                                                                 | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               |                                                                                   | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | Max                                                                               | Max                                                                               | None                                                                              | Max                                                                               |                                                                                   | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 | 7.0                                                                                 |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                    | 22.0                                                                                | 22.0                                                                                |                                                                                     | 22.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 20                                                                                | 20                                                                                |                                                                                   | 20                                                                                |                                                                                   |                                                                                    | 25                                                                                  | 25                                                                                  |                                                                                     | 25                                                                                  |                                                                                     |
| Act Effect Green (s)    | 14.3                                                                              | 32.4                                                                              | 32.4                                                                              | 21.2                                                                              | 39.3                                                                              |                                                                                   | 29.1                                                                               | 51.5                                                                                | 51.5                                                                                | 8.2                                                                                 | 30.6                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.10                                                                              | 0.23                                                                              | 0.23                                                                              | 0.15                                                                              | 0.28                                                                              |                                                                                   | 0.21                                                                               | 0.37                                                                                | 0.37                                                                                | 0.06                                                                                | 0.22                                                                                |                                                                                     |
| v/c Ratio               | 0.63                                                                              | 0.59                                                                              | 0.48                                                                              | 1.30                                                                              | 0.84                                                                              |                                                                                   | 0.95                                                                               | 1.02                                                                                | 0.76                                                                                | 0.70                                                                                | 0.62                                                                                |                                                                                     |
| Control Delay           | 75.9                                                                              | 51.3                                                                              | 8.0                                                                               | 196.3                                                                             | 57.0                                                                              |                                                                                   | 78.3                                                                               | 83.3                                                                                | 18.8                                                                                | 99.2                                                                                | 50.2                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 75.9                                                                              | 51.3                                                                              | 8.0                                                                               | 196.3                                                                             | 57.0                                                                              |                                                                                   | 78.3                                                                               | 83.3                                                                                | 18.8                                                                                | 99.2                                                                                | 50.2                                                                                |                                                                                     |
| LOS                     | E                                                                                 | D                                                                                 | A                                                                                 | F                                                                                 | E                                                                                 |                                                                                   | E                                                                                  | F                                                                                   | B                                                                                   | F                                                                                   | D                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 40.7                                                                              |                                                                                   |                                                                                   | 119.6                                                                             |                                                                                   |                                                                                    | 60.8                                                                                |                                                                                     |                                                                                     | 56.7                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | F                                                                                 |                                                                                   |                                                                                    | E                                                                                   |                                                                                     |                                                                                     | E                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 139.7

Natural Cycle: 150

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.30

Intersection Signal Delay: 74.7

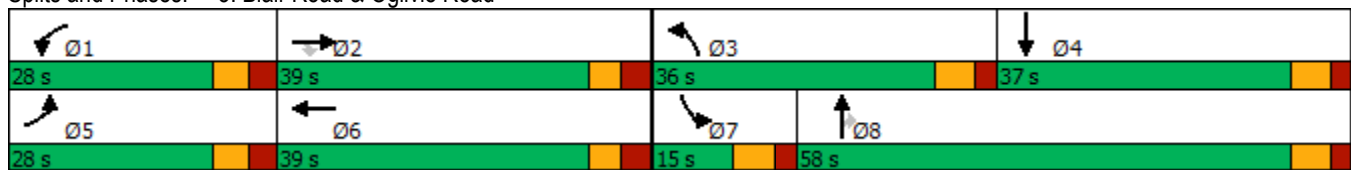
Intersection LOS: E

Intersection Capacity Utilization 96.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3: Blair Road & Ogilvie Road



## 1900/2000 City Park Drive

## 6: Blair Road &amp; 1980 Ogilvie Road/Hwy 174 WB off

Tot 2037 AM

|                            |  |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
|----------------------------|------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                                | EBT   | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL  | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |   |       |  |  |  |  |  |  |  |      |  |  |
| Traffic Volume (vph)       | 87                                                                                 | 0     | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                               | 281                                                                                | 1454                                                                                | 0                                                                                   | 0    | 936                                                                                 | 109                                                                                 |
| Future Volume (vph)        | 87                                                                                 | 0     | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                               | 281                                                                                | 1454                                                                                | 0                                                                                   | 0    | 936                                                                                 | 109                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                               | 1800  | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800 | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 0.0                                                                                |       | 70.0                                                                              | 0.0                                                                               |                                                                                   | 70.0                                                                              | 60.0                                                                               |                                                                                     | 0.0                                                                                 | 0.0  |                                                                                     | 50.0                                                                                |
| Storage Lanes              | 1                                                                                  |       | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                  |                                                                                     | 0                                                                                   | 0    |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 7.6                                                                                |       |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                   | 100.0                                                                              |                                                                                     |                                                                                     | 7.6  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                               | 1.00  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.97                                                                               | 0.95                                                                                | 1.00                                                                                | 1.00 | 0.91                                                                                | 1.00                                                                                |
| Frt                        |                                                                                    |       | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    |                                                                                     |                                                                                     |      |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                              |       |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1340                                                                               | 0     | 1199                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                               | 3262                                                                                | 0                                                                                   | 0    | 4732                                                                                | 1473                                                                                |
| Flt Permitted              | 0.662                                                                              |       |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 934                                                                                | 0     | 1199                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                               | 3262                                                                                | 0                                                                                   | 0    | 4732                                                                                | 1473                                                                                |
| Right Turn on Red          |                                                                                    |       | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |      |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                    |       | 34                                                                                |                                                                                   |                                                                                   | 104                                                                               |                                                                                    |                                                                                     |                                                                                     |      |                                                                                     | 111                                                                                 |
| Link Speed (k/h)           |                                                                                    | 60    |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |      | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                    | 518.9 |                                                                                   |                                                                                   | 416.4                                                                             |                                                                                   |                                                                                    | 90.2                                                                                |                                                                                     |      | 239.9                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                    | 31.1  |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                    | 5.4                                                                                 |                                                                                     |      | 14.4                                                                                |                                                                                     |
| Peak Hour Factor           | 1.00                                                                               | 1.00  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00 | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 29%                                                                                | 29%   | 29%                                                                               | 2%                                                                                | 2%                                                                                | 2%                                                                                | 6%                                                                                 | 6%                                                                                  | 6%                                                                                  | 5%   | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 87                                                                                 | 0     | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                               | 281                                                                                | 1454                                                                                | 0                                                                                   | 0    | 936                                                                                 | 109                                                                                 |
| Shared Lane Traffic (%)    |                                                                                    |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 87                                                                                 | 0     | 371                                                                               | 115                                                                               | 150                                                                               | 303                                                                               | 281                                                                                | 1454                                                                                | 0                                                                                   | 0    | 936                                                                                 | 109                                                                                 |
| Enter Blocked Intersection | No                                                                                 | No    | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No   | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                               | Left  | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                    | 3.7   |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 7.4                                                                                 |                                                                                     |      | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                    | 0.0   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                    | 4.9   |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |      | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                    |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                               | 1.06  | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06 | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                 |       | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24   |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                  |       | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   |                                                                                     |      | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                               |       | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                |                                                                                     |      | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                                |       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                | 30.5                                                                                |                                                                                     |      | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                                |       | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                | 1.8                                                                                 |                                                                                     |      | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                              |       | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     |      | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                    |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                                |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                    |       |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |      | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                    |       |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |      | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                    |       |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |      | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                    |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |      |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                    |       |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |      | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                               |       | pm+ov                                                                             | Perm                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                               | NA                                                                                  |                                                                                     |      | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                    |       | 5                                                                                 |                                                                                   | 8                                                                                 |                                                                                   | 5                                                                                  | 2                                                                                   |                                                                                     |      | 6                                                                                   |                                                                                     |

## 1900/2000 City Park Drive

## 6: Blair Road &amp; 1980 Ogilvie Road/Hwy 174 WB off

Tot 2037 AM

| Lane Group              | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL | SBT   | SBR   |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Permitted Phases        | 4     |      | 4     | 8     |       | 8     |       |       |     |     |       | 6     |
| Detector Phase          | 4     |      | 5     | 8     | 8     | 8     | 5     | 2     |     |     | 6     | 6     |
| Switch Phase            |       |      |       |       |       |       |       |       |     |     |       |       |
| Minimum Initial (s)     | 10.0  |      | 5.0   | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  |     |     | 10.0  | 10.0  |
| Minimum Split (s)       | 16.8  |      | 11.4  | 36.8  | 36.8  | 36.8  | 11.4  | 30.1  |     |     | 30.1  | 30.1  |
| Total Split (s)         | 41.0  |      | 27.0  | 41.0  | 41.0  | 41.0  | 27.0  | 59.0  |     |     | 32.0  | 32.0  |
| Total Split (%)         | 41.0% |      | 27.0% | 41.0% | 41.0% | 41.0% | 27.0% | 59.0% |     |     | 32.0% | 32.0% |
| Maximum Green (s)       | 34.2  |      | 20.6  | 34.2  | 34.2  | 34.2  | 20.6  | 52.9  |     |     | 25.9  | 25.9  |
| Yellow Time (s)         | 3.3   |      | 4.2   | 3.3   | 3.3   | 3.3   | 4.2   | 4.2   |     |     | 4.2   | 4.2   |
| All-Red Time (s)        | 3.5   |      | 2.2   | 3.5   | 3.5   | 3.5   | 2.2   | 1.9   |     |     | 1.9   | 1.9   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.8   |      | 6.4   | 6.8   | 6.8   | 6.8   | 6.4   | 6.1   |     |     | 6.1   | 6.1   |
| Lead/Lag                |       |      | Lead  |       |       |       | Lead  |       |     |     | Lag   | Lag   |
| Lead-Lag Optimize?      |       |      | Yes   |       |       |       | Yes   |       |     |     | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |     | 3.0   | 3.0   |
| Recall Mode             | None  |      | None  | None  | None  | None  | None  | Max   |     |     | Max   | Max   |
| Walk Time (s)           |       |      |       | 7.0   | 7.0   | 7.0   |       | 7.0   |     |     | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |      |       | 23.0  | 23.0  | 23.0  |       | 17.0  |     |     | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |       |      |       | 20    | 20    | 20    |       | 20    |     |     | 20    | 20    |
| Act Effct Green (s)     | 19.5  |      | 39.6  | 19.5  | 19.5  | 19.5  | 13.2  | 53.4  |     |     | 33.8  | 33.8  |
| Actuated g/C Ratio      | 0.23  |      | 0.46  | 0.23  | 0.23  | 0.23  | 0.15  | 0.62  |     |     | 0.39  | 0.39  |
| v/c Ratio               | 0.41  |      | 0.65  | 0.30  | 0.37  | 0.71  | 0.58  | 0.72  |     |     | 0.50  | 0.17  |
| Control Delay           | 33.2  |      | 20.7  | 28.3  | 29.6  | 28.9  | 39.5  | 15.5  |     |     | 23.3  | 5.8   |
| Queue Delay             | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Delay             | 33.2  |      | 20.7  | 28.3  | 29.6  | 28.9  | 39.5  | 15.5  |     |     | 23.3  | 5.8   |
| LOS                     | C     |      | C     | C     | C     | C     | D     | B     |     |     | C     | A     |
| Approach Delay          |       | 23.1 |       |       | 29.0  |       |       | 19.4  |     |     | 21.4  |       |
| Approach LOS            |       | C    |       |       | C     |       |       | B     |     |     | C     |       |

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 86

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 21.8

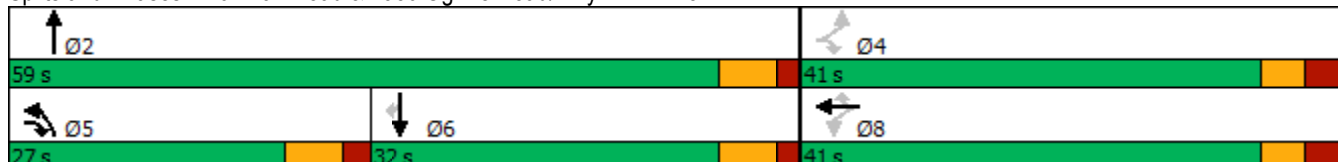
Intersection LOS: C

Intersection Capacity Utilization 81.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Blair Road &amp; 1980 Ogilvie Road/Hwy 174 WB off



1900/2000 City Park Drive  
7: 1980 Ogilvie Road

Tot 2037 AM

|                                        |  |  |  |  |  |  |
|----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                             | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations                    |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Future Volume (vph)                    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Ideal Flow (vphpl)                     | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Lane Util. Factor                      | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Fr t                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                      | 1784                                                                              | 0                                                                                 | 1784                                                                              | 0                                                                                 | 0                                                                                 | 1784                                                                              |
| Flt Permitted                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                      | 1784                                                                              | 0                                                                                 | 1784                                                                              | 0                                                                                 | 0                                                                                 | 1784                                                                              |
| Link Speed (k/h)                       | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)                      | 518.9                                                                             |                                                                                   | 235.1                                                                             |                                                                                   |                                                                                   | 57.3                                                                              |
| Travel Time (s)                        | 31.1                                                                              |                                                                                   | 14.1                                                                              |                                                                                   |                                                                                   | 3.4                                                                               |
| Peak Hour Factor                       | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              |
| Adj. Flow (vph)                        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Shared Lane Traffic (%)                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)                  | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Enter Blocked Intersection             | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                         | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)                        | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)                         | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)                     | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor                         | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)                    | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Sign Control                           | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                             | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                          | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization 0.0% | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Analysis Period (min) 15               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

1900/2000 City Park Drive

9: City Park Drive/1941 Ogilvie & Ogilvie Road

Tot 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                    |   |  |  |  |  |
| Traffic Volume (vph)       | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 166                                                                                 | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Future Volume (vph)        | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 166                                                                                 | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                  |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.97                                                                              |                                                                                   | 0.87                                                                              | 0.96                                                                              |                                                                                   | 0.81                                                                              |                                                                                    | 0.96                                                                                | 0.93                                                                                | 0.95                                                                                |                                                                                     |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.965                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                  | 1626                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.238                                                                             |                                                                                   |                                                                                   | 0.374                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.786                                                                               |                                                                                     | 0.704                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 411                                                                               | 3390                                                                              | 1320                                                                              | 635                                                                               | 3357                                                                              | 1211                                                                              | 0                                                                                  | 1269                                                                                | 1334                                                                                | 1193                                                                                | 1784                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 78                                                                                |                                                                                   |                                                                                   | 174                                                                               |                                                                                    |                                                                                     | 166                                                                                 |                                                                                     |                                                                                     | 56                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                    | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                    | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                    | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 100                                                                               |                                                                                   | 65                                                                                | 65                                                                                |                                                                                   | 100                                                                               | 53                                                                                 |                                                                                     | 51                                                                                  | 51                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                 | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                 | 23                                                                                  | 166                                                                                 | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 0                                                                                  | 82                                                                                  | 166                                                                                 | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                    | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                               | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                 |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                    | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                    | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                    | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Confl. Bikes (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |

1900/2000 City Park Drive

9: City Park Drive/1941 Ogilvie & Ogilvie Road

Tot 2037 AM

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector 2 Extend (s)   |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    | Perm  | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases        |       | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases        | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 6     | 6     | 6     | 8     | 8     | 8     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 35.1  | 35.1  | 35.1  | 35.1  | 35.1  | 35.1  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  |
| Total Split (s)         | 61.0  | 61.0  | 61.0  | 61.0  | 61.0  | 61.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)         | 61.0% | 61.0% | 61.0% | 61.0% | 61.0% | 61.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% |
| Maximum Green (s)       | 54.9  | 54.9  | 54.9  | 54.9  | 54.9  | 54.9  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.4   | 2.4   | 2.4   | 2.4   | 2.4   | 2.4   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |       | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |
| Lead/Lag                |       |       |       |       |       |       | Lag   | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Flash Dont Walk (s)     | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    |
| Act Effect Green (s)    | 64.2  | 64.2  | 64.2  | 64.2  | 64.2  | 64.2  |       | 20.2  | 20.2  | 20.2  | 20.2  | 20.2  |
| Actuated g/C Ratio      | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  |       | 0.20  | 0.20  | 0.20  | 0.20  | 0.20  |
| v/c Ratio               | 0.39  | 0.31  | 0.09  | 0.21  | 0.47  | 0.21  |       | 0.32  | 0.41  | 0.02  | 0.01  | 0.03  |
| Control Delay           | 9.4   | 3.5   | 0.3   | 12.0  | 12.0  | 2.3   |       | 34.8  | 8.0   | 27.2  | 27.0  | 0.1   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 9.4   | 3.5   | 0.3   | 12.0  | 12.0  | 2.3   |       | 34.8  | 8.0   | 27.2  | 27.0  | 0.1   |
| LOS                     | A     | A     | A     | B     | B     | A     |       | C     | A     | C     | C     | A     |
| Approach Delay          |       | 3.9   |       |       | 10.7  |       |       | 16.8  |       |       | 11.9  |       |
| Approach LOS            |       | A     |       |       | B     |       |       | B     |       |       | B     |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 13 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 8.9

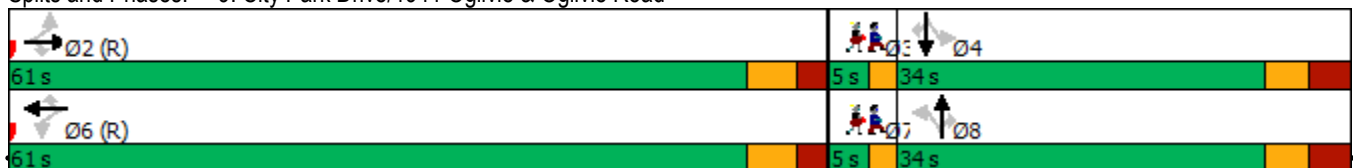
Intersection LOS: A

Intersection Capacity Utilization 74.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



Synchro 11 Report

05/01/2023

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Detector 2 Extend (s)   |      |      |
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

1900/2000 City Park Drive

12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

Tot 2037 AM

|                            |  |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                 | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 99                                                                                 | 832   | 27    | 19    | 1151  | 44    | 9     | 1     | 12    | 42    | 11    | 63    |
| Future Volume (vph)        | 99                                                                                 | 832   | 27    | 19    | 1151  | 44    | 9     | 1     | 12    | 42    | 11    | 63    |
| Ideal Flow (vphpl)         | 1800                                                                               | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  |
| Storage Length (m)         | 60.0                                                                               |       | 80.0  | 90.0  |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   |
| Storage Lanes              | 1                                                                                  |       | 1     | 1     |       | 0     | 1     |       | 0     | 0     |       | 1     |
| Taper Length (m)           | 30.0                                                                               |       |       | 20.0  |       |       | 7.6   |       |       | 7.6   |       |       |
| Lane Util. Factor          | 1.00                                                                               | 0.95  | 1.00  | 1.00  | 0.95  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            | 0.99                                                                               |       | 0.95  | 0.99  | 1.00  |       | 0.96  | 0.95  |       |       | 0.96  | 0.94  |
| Frt                        |                                                                                    |       | 0.850 |       | 0.994 |       |       | 0.862 |       |       |       | 0.850 |
| Flt Protected              | 0.950                                                                              |       |       | 0.950 |       |       | 0.950 |       |       |       | 0.962 |       |
| Satd. Flow (prot)          | 1695                                                                               | 3390  | 1517  | 1679  | 3324  | 0     | 1695  | 1454  | 0     | 0     | 1717  | 1517  |
| Flt Permitted              | 0.195                                                                              |       |       | 0.316 |       |       | 0.722 |       |       |       | 0.774 |       |
| Satd. Flow (perm)          | 344                                                                                | 3390  | 1434  | 553   | 3324  | 0     | 1232  | 1454  | 0     | 0     | 1329  | 1429  |
| Right Turn on Red          |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |                                                                                    |       | 40    |       | 6     |       |       | 12    |       |       |       | 61    |
| Link Speed (k/h)           |                                                                                    | 60    |       |       | 60    |       |       | 60    |       |       |       | 60    |
| Link Distance (m)          |                                                                                    | 190.5 |       |       | 224.7 |       |       | 86.0  |       |       |       | 56.6  |
| Travel Time (s)            |                                                                                    | 11.4  |       |       | 13.5  |       |       | 5.2   |       |       |       | 3.4   |
| Confl. Peds. (#/hr)        | 41                                                                                 |       | 17    | 17    |       | 41    | 47    |       | 48    | 48    |       | 47    |
| Peak Hour Factor           | 1.00                                                                               | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%    | 2%    | 3%    | 3%    | 3%    | 2%    | 2%    | 2%    | 2%    | 2%    | 2%    |
| Adj. Flow (vph)            | 99                                                                                 | 832   | 27    | 19    | 1151  | 44    | 9     | 1     | 12    | 42    | 11    | 63    |
| Shared Lane Traffic (%)    |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 99                                                                                 | 832   | 27    | 19    | 1195  | 0     | 9     | 13    | 0     | 0     | 53    | 63    |
| Enter Blocked Intersection | No                                                                                 | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left                                                                               | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(m)            |                                                                                    | 3.7   |       |       | 3.7   |       |       | 3.7   |       |       |       | 3.7   |
| Link Offset(m)             |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       |       | 0.0   |
| Crosswalk Width(m)         |                                                                                    | 4.9   |       |       | 4.9   |       |       | 4.9   |       |       |       | 4.9   |
| Two way Left Turn Lane     |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.06                                                                               | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  |
| Turning Speed (k/h)        | 24                                                                                 |       | 14    | 24    |       | 14    | 24    |       | 14    | 24    |       | 14    |
| Number of Detectors        | 1                                                                                  | 2     | 1     | 1     | 2     |       | 1     | 2     |       | 1     | 2     | 1     |
| Detector Template          | Left                                                                               | Thru  | Right | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  | Right |
| Leading Detector (m)       | 6.1                                                                                | 30.5  | 6.1   | 6.1   | 30.5  |       | 6.1   | 30.5  |       | 6.1   | 30.5  | 6.1   |
| Trailing Detector (m)      | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Position(m)     | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Size(m)         | 6.1                                                                                | 1.8   | 6.1   | 6.1   | 1.8   |       | 6.1   | 1.8   |       | 6.1   | 1.8   | 6.1   |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(m)     |                                                                                    | 28.7  |       |       | 28.7  |       |       | 28.7  |       |       |       | 28.7  |
| Detector 2 Size(m)         |                                                                                    | 1.8   |       |       | 1.8   |       |       | 1.8   |       |       |       | 1.8   |
| Detector 2 Type            |                                                                                    | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |       |       | Cl+Ex |
| Detector 2 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       |       | 0.0   |

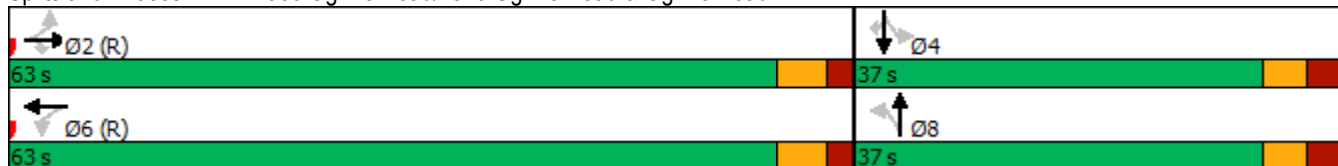
# 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

Tot 2037 AM

|                                                                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                                                              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type                                                               | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases                                                        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases                                                        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   |                                                                                   | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase                                                          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 6                                                                                 | 6                                                                                 |                                                                                   | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)                                                     | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              | 10.0                                                                              |                                                                                   | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)                                                       | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              | 29.9                                                                              |                                                                                   | 36.7                                                                               | 36.7                                                                                |                                                                                     | 36.7                                                                                | 36.7                                                                                | 36.7                                                                                |
| Total Split (s)                                                         | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              | 63.0                                                                              |                                                                                   | 37.0                                                                               | 37.0                                                                                |                                                                                     | 37.0                                                                                | 37.0                                                                                | 37.0                                                                                |
| Total Split (%)                                                         | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             | 63.0%                                                                             |                                                                                   | 37.0%                                                                              | 37.0%                                                                               |                                                                                     | 37.0%                                                                               | 37.0%                                                                               | 37.0%                                                                               |
| Maximum Green (s)                                                       | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              | 57.1                                                                              |                                                                                   | 30.3                                                                               | 30.3                                                                                |                                                                                     | 30.3                                                                                | 30.3                                                                                | 30.3                                                                                |
| Yellow Time (s)                                                         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               |                                                                                   | 3.3                                                                                | 3.3                                                                                 |                                                                                     | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 |
| All-Red Time (s)                                                        | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               | 2.2                                                                               |                                                                                   | 3.4                                                                                | 3.4                                                                                 |                                                                                     | 3.4                                                                                 | 3.4                                                                                 | 3.4                                                                                 |
| Lost Time Adjust (s)                                                    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)                                                     | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               | 5.9                                                                               |                                                                                   | 6.7                                                                                | 6.7                                                                                 |                                                                                     |                                                                                     | 6.7                                                                                 | 6.7                                                                                 |
| Lead/Lag                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)                                                   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             | C-Max                                                                             |                                                                                   | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)                                                           | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |
| Flash Dont Walk (s)                                                     | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              | 13.0                                                                              |                                                                                   | 23.0                                                                               | 23.0                                                                                |                                                                                     | 23.0                                                                                | 23.0                                                                                | 23.0                                                                                |
| Pedestrian Calls (#/hr)                                                 | 10                                                                                | 10                                                                                | 10                                                                                | 10                                                                                | 10                                                                                |                                                                                   | 30                                                                                 | 30                                                                                  |                                                                                     | 30                                                                                  | 30                                                                                  | 30                                                                                  |
| Act Effct Green (s)                                                     | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              | 69.9                                                                              |                                                                                   | 22.0                                                                               | 22.0                                                                                |                                                                                     |                                                                                     | 22.0                                                                                | 22.0                                                                                |
| Actuated g/C Ratio                                                      | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              | 0.70                                                                              |                                                                                   | 0.22                                                                               | 0.22                                                                                |                                                                                     |                                                                                     | 0.22                                                                                | 0.22                                                                                |
| v/c Ratio                                                               | 0.41                                                                              | 0.35                                                                              | 0.03                                                                              | 0.05                                                                              | 0.51                                                                              |                                                                                   | 0.03                                                                               | 0.04                                                                                |                                                                                     |                                                                                     | 0.18                                                                                | 0.17                                                                                |
| Control Delay                                                           | 17.0                                                                              | 8.4                                                                               | 1.7                                                                               | 5.7                                                                               | 5.5                                                                               |                                                                                   | 25.2                                                                               | 13.3                                                                                |                                                                                     |                                                                                     | 29.3                                                                                | 8.5                                                                                 |
| Queue Delay                                                             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay                                                             | 17.0                                                                              | 8.4                                                                               | 1.7                                                                               | 5.7                                                                               | 5.5                                                                               |                                                                                   | 25.2                                                                               | 13.3                                                                                |                                                                                     |                                                                                     | 29.3                                                                                | 8.5                                                                                 |
| LOS                                                                     | B                                                                                 | A                                                                                 | A                                                                                 | A                                                                                 | A                                                                                 |                                                                                   | C                                                                                  | B                                                                                   |                                                                                     |                                                                                     | C                                                                                   | A                                                                                   |
| Approach Delay                                                          |                                                                                   | 9.1                                                                               |                                                                                   |                                                                                   | 5.5                                                                               |                                                                                   |                                                                                    | 18.2                                                                                |                                                                                     |                                                                                     | 18.0                                                                                |                                                                                     |
| Approach LOS                                                            |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| Intersection Summary                                                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                                                              | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Cycle Length: 100                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length: 100                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Offset: 12 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Natural Cycle: 80                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type: Actuated-Coordinated                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Maximum v/c Ratio: 0.51                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Signal Delay: 7.7                                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Intersection LOS: A                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization 94.4%                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service F                                                            |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min) 15                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Splits and Phases: 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road



## 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive &amp; Ogilvie Road

Tot 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 156                                                                               | 598                                                                               | 87                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 120                                                                                 | 37                                                                                  | 13                                                                                  | 119                                                                                 | 24                                                                                  | 178                                                                                 |
| Future Volume (vph)        | 156                                                                               | 598                                                                               | 87                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 120                                                                                 | 37                                                                                  | 13                                                                                  | 119                                                                                 | 24                                                                                  | 178                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 40.0                                                                              | 45.0                                                                              |                                                                                   | 70.0                                                                              | 30.0                                                                                |                                                                                     | 0.0                                                                                 | 20.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                                |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.99                                                                              |                                                                                   | 0.92                                                                              | 0.98                                                                              |                                                                                   | 0.89                                                                              | 0.99                                                                                | 0.99                                                                                |                                                                                     | 0.98                                                                                | 0.98                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     | 0.961                                                                               |                                                                                     |                                                                                     | 0.868                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1631                                                                                | 1635                                                                                | 0                                                                                   | 1647                                                                                | 1470                                                                                | 0                                                                                   |
| Flt Permitted              | 0.182                                                                             |                                                                                   |                                                                                   | 0.426                                                                             |                                                                                   |                                                                                   | 0.546                                                                               |                                                                                     |                                                                                     | 0.724                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 317                                                                               | 3357                                                                              | 1389                                                                              | 737                                                                               | 3357                                                                              | 1340                                                                              | 928                                                                                 | 1635                                                                                | 0                                                                                   | 1228                                                                                | 1470                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 121                                                                               |                                                                                   |                                                                                   | 161                                                                               |                                                                                     | 13                                                                                  |                                                                                     |                                                                                     | 178                                                                                 |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                     | 345.6                                                                               |                                                                                     |                                                                                     | 177.6                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                     | 20.7                                                                                |                                                                                     |                                                                                     | 10.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 43                                                                                |                                                                                   | 27                                                                                | 27                                                                                |                                                                                   | 43                                                                                | 14                                                                                  |                                                                                     | 23                                                                                  | 23                                                                                  |                                                                                     | 14                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 156                                                                               | 598                                                                               | 87                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 120                                                                                 | 37                                                                                  | 13                                                                                  | 119                                                                                 | 24                                                                                  | 178                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 156                                                                               | 598                                                                               | 87                                                                                | 14                                                                                | 981                                                                               | 161                                                                               | 120                                                                                 | 50                                                                                  | 0                                                                                   | 119                                                                                 | 202                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive & Ogilvie Road

Tot 2037 AM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | pm+pt                                                                             | NA                                                                                | Perm                                                                              | pm+pt                                                                             | NA                                                                                | Perm                                                                              | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 37.4                                                                               | 37.4                                                                                |                                                                                     | 37.4                                                                                | 37.4                                                                                |                                                                                     |
| Total Split (s)         | 15.0                                                                              | 42.0                                                                              | 42.0                                                                              | 15.0                                                                              | 42.0                                                                              | 42.0                                                                              | 38.0                                                                               | 38.0                                                                                |                                                                                     | 38.0                                                                                | 38.0                                                                                |                                                                                     |
| Total Split (%)         | 15.0%                                                                             | 42.0%                                                                             | 42.0%                                                                             | 15.0%                                                                             | 42.0%                                                                             | 42.0%                                                                             | 38.0%                                                                              | 38.0%                                                                               |                                                                                     | 38.0%                                                                               | 38.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 10.3                                                                              | 36.0                                                                              | 36.0                                                                              | 10.3                                                                              | 36.0                                                                              | 36.0                                                                              | 30.6                                                                               | 30.6                                                                                |                                                                                     | 30.6                                                                                | 30.6                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 4.4                                                                                | 4.4                                                                                 |                                                                                     | 4.4                                                                                 | 4.4                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 7.4                                                                                | 7.4                                                                                 |                                                                                     | 7.4                                                                                 | 7.4                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                | Lag                                                                                 |                                                                                     | Lag                                                                                 | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              | 28.0                                                                               | 28.0                                                                                |                                                                                     | 28.0                                                                                | 28.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 15                                                                                | 15                                                                                |                                                                                   | 15                                                                                | 15                                                                                | 15                                                                                 | 15                                                                                  |                                                                                     | 15                                                                                  | 15                                                                                  |                                                                                     |
| Act Effect Green (s)    | 62.7                                                                              | 59.2                                                                              | 59.2                                                                              | 55.0                                                                              | 47.8                                                                              | 47.8                                                                              | 20.1                                                                               | 20.1                                                                                |                                                                                     | 20.1                                                                                | 20.1                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.63                                                                              | 0.59                                                                              | 0.59                                                                              | 0.55                                                                              | 0.48                                                                              | 0.48                                                                              | 0.20                                                                               | 0.20                                                                                |                                                                                     | 0.20                                                                                | 0.20                                                                                |                                                                                     |
| v/c Ratio               | 0.49                                                                              | 0.30                                                                              | 0.10                                                                              | 0.03                                                                              | 0.61                                                                              | 0.22                                                                              | 0.65                                                                               | 0.15                                                                                |                                                                                     | 0.48                                                                                | 0.46                                                                                |                                                                                     |
| Control Delay           | 25.9                                                                              | 21.7                                                                              | 10.0                                                                              | 6.1                                                                               | 12.5                                                                              | 1.3                                                                               | 50.4                                                                               | 23.5                                                                                |                                                                                     | 39.6                                                                                | 9.7                                                                                 |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 25.9                                                                              | 21.7                                                                              | 10.0                                                                              | 6.1                                                                               | 12.5                                                                              | 1.3                                                                               | 50.4                                                                               | 23.5                                                                                |                                                                                     | 39.6                                                                                | 9.7                                                                                 |                                                                                     |
| LOS                     | C                                                                                 | C                                                                                 | A                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | D                                                                                  | C                                                                                   |                                                                                     | D                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 21.3                                                                              |                                                                                   |                                                                                   | 10.8                                                                              |                                                                                   |                                                                                    | 42.5                                                                                |                                                                                     |                                                                                     | 20.8                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | D                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 29 (29%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 17.8

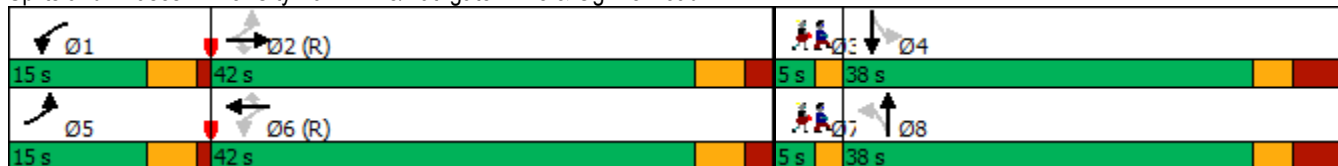
Intersection LOS: B

Intersection Capacity Utilization 85.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: City Park Drive/Bathgate Drive & Ogilvie Road



1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

Tot 2037 AM

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | Ped  | Ped  |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 15   | 15   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

## 1900/2000 City Park Drive

## 18: Residential/Cadboro Road &amp; Ogilvie Road

Tot 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                     |                                                                                     |  |                                                                                     |                                                                                     |  |
| Traffic Volume (vph)       | 0                                                                                 | 1215                                                                              | 9                                                                                 | 0                                                                                 | 1305                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Future Volume (vph)        | 0                                                                                 | 1215                                                                              | 9                                                                                 | 0                                                                                 | 1305                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Fr't                       |                                                                                   | 0.999                                                                             |                                                                                   |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     | 0.865                                                                               |
| Flt Protected              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3370                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3370                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   | 7                                                                                 |                                                                                   |                                                                                     |                                                                                     | 53                                                                                  |                                                                                     |                                                                                     | 42                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                     | 90.1                                                                                |                                                                                     |                                                                                     | 116.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj. Flow (vph)            | 0                                                                                 | 1215                                                                              | 9                                                                                 | 0                                                                                 | 1305                                                                              | 57                                                                                | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 1224                                                                              | 0                                                                                 | 0                                                                                 | 1362                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 6                                                                                   | 0                                                                                   | 0                                                                                   | 21                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                     | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Detector Template          |                                                                                   | Thru                                                                              |                                                                                   |                                                                                   | Thru                                                                              |                                                                                   |                                                                                     |                                                                                     | Right                                                                               |                                                                                     |                                                                                     | Right                                                                               |
| Leading Detector (m)       |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Trailing Detector (m)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Position(m)     |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Detector 1 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Queue (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Delay (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type                  |                                                                                   | NA                                                                                |                                                                                   |                                                                                   | NA                                                                                |                                                                                   |                                                                                     |                                                                                     | Perm                                                                                |                                                                                     |                                                                                     | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Permitted Phases           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Detector Phase             |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |

1900/2000 City Park Drive  
18: Residential/Cadboro Road & Ogilvie Road

Tot 2037 AM

|                         |  |       |     |     |       |     |     |     |       |     |     |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-----|-------|-----|-----|-----|-------|-----|-----|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL | WBT   | WBR | NBL | NBT | NBR   | SBL | SBT | SBR   |
| Minimum Split (s)       |                                                                                    | 35.0  |     |     | 35.0  |     |     |     | 40.0  |     |     | 40.0  |
| Total Split (s)         |                                                                                    | 60.0  |     |     | 60.0  |     |     |     | 40.0  |     |     | 40.0  |
| Total Split (%)         |                                                                                    | 60.0% |     |     | 60.0% |     |     |     | 40.0% |     |     | 40.0% |
| Maximum Green (s)       |                                                                                    | 54.0  |     |     | 54.0  |     |     |     | 36.0  |     |     | 36.0  |
| Yellow Time (s)         |                                                                                    | 3.7   |     |     | 3.7   |     |     |     | 3.0   |     |     | 3.0   |
| All-Red Time (s)        |                                                                                    | 2.3   |     |     | 2.3   |     |     |     | 1.0   |     |     | 1.0   |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |     | 0.0   |
| Total Lost Time (s)     |                                                                                    | 6.0   |     |     | 6.0   |     |     |     | 4.0   |     |     | 4.0   |
| Lead/Lag                |                                                                                    |       |     |     |       |     |     |     |       |     |     |       |
| Lead-Lag Optimize?      |                                                                                    |       |     |     |       |     |     |     |       |     |     |       |
| Vehicle Extension (s)   |                                                                                    | 3.0   |     |     | 3.0   |     |     |     | 3.0   |     |     | 3.0   |
| Recall Mode             |                                                                                    | C-Max |     |     | C-Max |     |     |     | None  |     |     | None  |
| Walk Time (s)           |                                                                                    | 15.0  |     |     | 15.0  |     |     |     | 24.0  |     |     | 24.0  |
| Flash Dont Walk (s)     |                                                                                    | 14.0  |     |     | 14.0  |     |     |     | 12.0  |     |     | 12.0  |
| Pedestrian Calls (#/hr) |                                                                                    | 20    |     |     | 20    |     |     |     | 15    |     |     | 15    |
| Act Effct Green (s)     |                                                                                    | 78.5  |     |     | 78.5  |     |     |     | 17.7  |     |     | 17.7  |
| Actuated g/C Ratio      |                                                                                    | 0.78  |     |     | 0.78  |     |     |     | 0.18  |     |     | 0.18  |
| v/c Ratio               |                                                                                    | 0.46  |     |     | 0.51  |     |     |     | 0.02  |     |     | 0.07  |
| Control Delay           |                                                                                    | 7.0   |     |     | 5.4   |     |     |     | 0.2   |     |     | 2.9   |
| Queue Delay             |                                                                                    | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |     | 0.0   |
| Total Delay             |                                                                                    | 7.0   |     |     | 5.4   |     |     |     | 0.2   |     |     | 2.9   |
| LOS                     |                                                                                    | A     |     |     | A     |     |     |     | A     |     |     | A     |
| Approach Delay          |                                                                                    | 7.0   |     |     | 5.4   |     |     | 0.2 |       |     | 2.9 |       |
| Approach LOS            |                                                                                    | A     |     |     | A     |     |     | A   |       |     | A   |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 42 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 6.1

Intersection LOS: A

Intersection Capacity Utilization 52.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 18: Residential/Cadboro Road & Ogilvie Road

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
|  |  |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

Tot 2037 AM

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |  |                                                                                   |  |
| Traffic Volume (vph)       | 198                                                                               | 1021                                                                              | 918                                                                               | 81                                                                                | 197                                                                               | 498                                                                               |
| Future Volume (vph)        | 198                                                                               | 1021                                                                              | 918                                                                               | 81                                                                                | 197                                                                               | 498                                                                               |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Storage Length (m)         | 0.0                                                                               | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   |
| Storage Lanes              | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.986                                                                             |
| Satd. Flow (prot)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 3217                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.574                                                                             |
| Satd. Flow (perm)          | 1647                                                                              | 1473                                                                              | 3325                                                                              | 1488                                                                              | 0                                                                                 | 1873                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 478                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (k/h)           | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)          | 216.4                                                                             |                                                                                   | 230.9                                                                             |                                                                                   |                                                                                   | 341.9                                                                             |
| Travel Time (s)            | 13.0                                                                              |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 20.5                                                                              |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Heavy Vehicles (%)         | 5%                                                                                | 5%                                                                                | 4%                                                                                | 4%                                                                                | 6%                                                                                | 6%                                                                                |
| Adj. Flow (vph)            | 198                                                                               | 1021                                                                              | 918                                                                               | 81                                                                                | 197                                                                               | 498                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 198                                                                               | 1021                                                                              | 918                                                                               | 81                                                                                | 0                                                                                 | 695                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)            | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)             | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)         | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)        | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |
| Leading Detector (m)       | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Size(m)         | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| Detector 2 Position(m)     |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |
| Detector 2 Size(m)         |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |
| Detector 2 Type            |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Turn Type                  | Prot                                                                              | Free                                                                              | NA                                                                                | pm+ov                                                                             | Perm                                                                              | NA                                                                                |
| Protected Phases           | 8                                                                                 |                                                                                   | 2                                                                                 | 8                                                                                 |                                                                                   | 6                                                                                 |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

Tot 2037 AM

|                         |  |      |       |       |       |       |
|-------------------------|-----------------------------------------------------------------------------------|------|-------|-------|-------|-------|
| Lane Group              | WBL                                                                               | WBR  | NBT   | NBR   | SBL   | SBT   |
| Permitted Phases        | Free                                                                              |      |       | 2     | 6     |       |
| Detector Phase          | 8                                                                                 |      | 2     | 8     | 6     | 6     |
| Switch Phase            |                                                                                   |      |       |       |       |       |
| Minimum Initial (s)     | 5.0                                                                               |      | 10.0  | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 25.3                                                                              |      | 30.5  | 25.3  | 16.5  | 16.5  |
| Total Split (s)         | 35.0                                                                              |      | 55.0  | 35.0  | 55.0  | 55.0  |
| Total Split (%)         | 38.9%                                                                             |      | 61.1% | 38.9% | 61.1% | 61.1% |
| Maximum Green (s)       | 28.7                                                                              |      | 48.5  | 28.7  | 48.5  | 48.5  |
| Yellow Time (s)         | 3.3                                                                               |      | 4.2   | 3.3   | 4.2   | 4.2   |
| All-Red Time (s)        | 3.0                                                                               |      | 2.3   | 3.0   | 2.3   | 2.3   |
| Lost Time Adjust (s)    | 0.0                                                                               |      | 0.0   | 0.0   |       | 0.0   |
| Total Lost Time (s)     | 6.3                                                                               |      | 6.5   | 6.3   |       | 6.5   |
| Lead/Lag                |                                                                                   |      |       |       |       |       |
| Lead-Lag Optimize?      |                                                                                   |      |       |       |       |       |
| Vehicle Extension (s)   | 3.0                                                                               |      | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None                                                                              |      | Max   | None  | Max   | Max   |
| Walk Time (s)           | 7.0                                                                               |      | 7.0   | 7.0   |       |       |
| Flash Dont Walk (s)     | 12.0                                                                              |      | 17.0  | 12.0  |       |       |
| Pedestrian Calls (#/hr) | 0                                                                                 |      | 0     | 0     |       |       |
| Act Effct Green (s)     | 14.2                                                                              | 75.7 | 48.6  | 75.7  |       | 48.6  |
| Actuated g/C Ratio      | 0.19                                                                              | 1.00 | 0.64  | 1.00  |       | 0.64  |
| v/c Ratio               | 0.64                                                                              | 0.69 | 0.43  | 0.05  |       | 0.58  |
| Control Delay           | 38.1                                                                              | 2.7  | 8.0   | 0.1   |       | 10.9  |
| Queue Delay             | 0.0                                                                               | 0.0  | 0.0   | 0.0   |       | 0.0   |
| Total Delay             | 38.1                                                                              | 2.7  | 8.0   | 0.1   |       | 10.9  |
| LOS                     | D                                                                                 | A    | A     | A     |       | B     |
| Approach Delay          | 8.5                                                                               |      | 7.4   |       |       | 10.9  |
| Approach LOS            | A                                                                                 |      | A     |       |       | B     |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 75.7

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 8.7

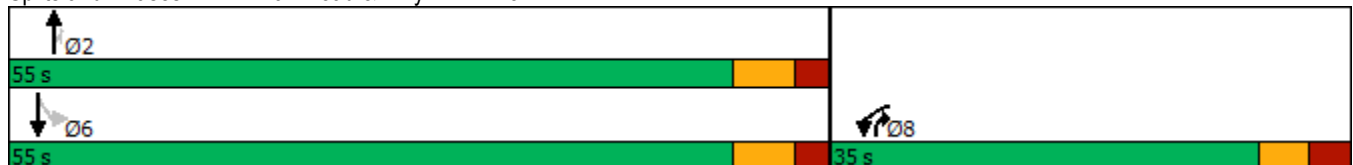
Intersection LOS: A

Intersection Capacity Utilization 75.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 22: Blair Road & Hwy 174 EB off



1900/2000 City Park Drive  
25: Blair Road

Tot 2037 AM

|                                        |  |  |  |  |  |  |
|----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                             | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations                    |                                                                                   |                                                                                   |                                                                                   | ↑↑                                                                                | ↑↑                                                                                | ↑                                                                                 |
| Traffic Volume (vph)                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Future Volume (vph)                    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Ideal Flow (vphpl)                     | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Lane Util. Factor                      | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              |
| Fr't                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                      | 0                                                                                 | 0                                                                                 | 0                                                                                 | 3390                                                                              | 3390                                                                              | 1784                                                                              |
| Flt Permitted                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                      | 0                                                                                 | 0                                                                                 | 0                                                                                 | 3390                                                                              | 3390                                                                              | 1784                                                                              |
| Link Speed (k/h)                       | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   |
| Link Distance (m)                      | 105.8                                                                             |                                                                                   |                                                                                   | 341.9                                                                             | 90.2                                                                              |                                                                                   |
| Travel Time (s)                        | 6.3                                                                               |                                                                                   |                                                                                   | 20.5                                                                              | 5.4                                                                               |                                                                                   |
| Peak Hour Factor                       | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              |
| Adj. Flow (vph)                        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Shared Lane Traffic (%)                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)                  | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Enter Blocked Intersection             | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                         | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Left                                                                              | Right                                                                             |
| Median Width(m)                        | 0.0                                                                               |                                                                                   |                                                                                   | 7.4                                                                               | 7.4                                                                               |                                                                                   |
| Link Offset(m)                         | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   |
| Crosswalk Width(m)                     | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               | 1.6                                                                               |                                                                                   |
| Two way Left Turn Lane                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor                         | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)                    | 24                                                                                | 14                                                                                | 24                                                                                |                                                                                   |                                                                                   | 14                                                                                |
| Sign Control                           | Yield                                                                             |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| Intersection Summary                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                             | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                          | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization 0.0% | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Analysis Period (min) 15               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

## 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road &amp; Ogilvie Road

Tot 2037 AM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 83                                                                                | 1084                                                                              | 21                                                                                | 33                                                                                | 1298                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Future Volume (vph)        | 83                                                                                | 1084                                                                              | 21                                                                                | 33                                                                                | 1298                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 70.0                                                                              |                                                                                   | 0.0                                                                               | 15.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 35.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 1.00                                                                              |                                                                                   | 0.99                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.98                                                                                |                                                                                     |                                                                                     | 0.99                                                                                | 0.99                                                                                |
| Frt                        |                                                                                   | 0.997                                                                             |                                                                                   |                                                                                   | 0.998                                                                             |                                                                                   |                                                                                     | 0.861                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.956                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3375                                                                              | 0                                                                                 | 1695                                                                              | 3382                                                                              | 0                                                                                 | 1662                                                                                | 1471                                                                                | 0                                                                                   | 0                                                                                   | 1706                                                                                | 1517                                                                                |
| Flt Permitted              | 0.145                                                                             |                                                                                   |                                                                                   | 0.216                                                                             |                                                                                   |                                                                                   | 0.740                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.727                                                                               |                                                                                     |
| Satd. Flow (perm)          | 259                                                                               | 3375                                                                              | 0                                                                                 | 383                                                                               | 3382                                                                              | 0                                                                                 | 1290                                                                                | 1471                                                                                | 0                                                                                   | 0                                                                                   | 1282                                                                                | 1497                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 1                                                                                 |                                                                                   |                                                                                     | 26                                                                                  |                                                                                     |                                                                                     |                                                                                     | 171                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 314.1                                                                             |                                                                                   |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                     | 176.2                                                                               |                                                                                     |                                                                                     |                                                                                     | 174.1                                                                               |
| Travel Time (s)            |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     |                                                                                     | 10.4                                                                                |
| Confl. Peds. (#/hr)        | 11                                                                                |                                                                                   | 26                                                                                | 26                                                                                |                                                                                   | 11                                                                                | 4                                                                                   |                                                                                     | 14                                                                                  | 14                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 21                                                                                |                                                                                   |                                                                                   | 9                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                  | 4%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 83                                                                                | 1084                                                                              | 21                                                                                | 33                                                                                | 1298                                                                              | 14                                                                                | 57                                                                                  | 2                                                                                   | 26                                                                                  | 25                                                                                  | 2                                                                                   | 171                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 83                                                                                | 1105                                                                              | 0                                                                                 | 33                                                                                | 1312                                                                              | 0                                                                                 | 57                                                                                  | 28                                                                                  | 0                                                                                   | 0                                                                                   | 27                                                                                  | 171                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road & Ogilvie Road

Tot 2037 AM

|                         |  |       |     |       |       |     |       |       |     |       |       |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
| Detector 2 Extend (s)   |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |       |
| Turn Type               | pm+pt                                                                              | NA    |     | pm+pt | NA    |     | Perm  | NA    |     | Perm  | NA    | Perm  |
| Protected Phases        | 5                                                                                  | 2     |     | 1     | 6     |     |       | 8     |     |       | 4     |       |
| Permitted Phases        | 2                                                                                  |       |     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 5                                                                                  | 2     |     | 1     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |                                                                                    |       |     |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 5.0                                                                                | 10.0  |     | 5.0   | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.7                                                                                | 33.6  |     | 9.7   | 33.6  |     | 40.2  | 40.2  |     | 40.2  | 40.2  | 40.2  |
| Total Split (s)         | 13.0                                                                               | 47.0  |     | 13.0  | 47.0  |     | 40.0  | 40.0  |     | 40.0  | 40.0  | 40.0  |
| Total Split (%)         | 13.0%                                                                              | 47.0% |     | 13.0% | 47.0% |     | 40.0% | 40.0% |     | 40.0% | 40.0% | 40.0% |
| Maximum Green (s)       | 8.3                                                                                | 41.4  |     | 8.3   | 41.4  |     | 32.8  | 32.8  |     | 32.8  | 32.8  | 32.8  |
| Yellow Time (s)         | 3.7                                                                                | 3.7   |     | 3.7   | 3.7   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 1.0                                                                                | 1.9   |     | 1.0   | 1.9   |     | 4.2   | 4.2   |     | 4.2   | 4.2   | 4.2   |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 4.7                                                                                | 5.6   |     | 4.7   | 5.6   |     | 7.2   | 7.2   |     |       | 7.2   | 7.2   |
| Lead/Lag                | Lead                                                                               | Lag   |     | Lead  | Lag   |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   |     | Yes   | Yes   |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None                                                                               | C-Max |     | None  | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           |                                                                                    | 15.0  |     |       | 15.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |                                                                                    | 13.0  |     |       | 13.0  |     | 26.0  | 26.0  |     | 26.0  | 26.0  | 26.0  |
| Pedestrian Calls (#/hr) |                                                                                    | 10    |     |       | 10    |     | 10    | 10    |     | 10    | 10    | 10    |
| Act Effect Green (s)    | 70.9                                                                               | 65.6  |     | 68.9  | 62.9  |     | 14.9  | 14.9  |     |       | 14.9  | 14.9  |
| Actuated g/C Ratio      | 0.71                                                                               | 0.66  |     | 0.69  | 0.63  |     | 0.15  | 0.15  |     |       | 0.15  | 0.15  |
| v/c Ratio               | 0.30                                                                               | 0.50  |     | 0.10  | 0.62  |     | 0.30  | 0.12  |     |       | 0.14  | 0.46  |
| Control Delay           | 8.6                                                                                | 12.7  |     | 5.1   | 8.8   |     | 38.9  | 13.0  |     |       | 34.7  | 9.0   |
| Queue Delay             | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 8.6                                                                                | 12.7  |     | 5.1   | 8.8   |     | 38.9  | 13.0  |     |       | 34.7  | 9.0   |
| LOS                     | A                                                                                  | B     |     | A     | A     |     | D     | B     |     |       | C     | A     |
| Approach Delay          |                                                                                    | 12.4  |     |       | 8.7   |     |       | 30.4  |     |       | 12.5  |       |
| Approach LOS            |                                                                                    | B     |     |       | A     |     |       | C     |     |       | B     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 54 (54%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 11.2

Intersection LOS: B

Intersection Capacity Utilization 81.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1630: Palmerston Drive/Matheson Road & Ogilvie Road



Synchro 11 Report

05/01/2023

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

Tot 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 157                                                                               | 852                                                                               | 640                                                                               | 875                                                                               | 504                                                                               | 83                                                                                | 276                                                                                 | 296                                                                                 | 923                                                                                 | 75                                                                                  | 761                                                                                 | 73                                                                                  |
| Future Volume (vph)        | 157                                                                               | 852                                                                               | 640                                                                               | 875                                                                               | 504                                                                               | 83                                                                                | 276                                                                                 | 296                                                                                 | 923                                                                                 | 75                                                                                  | 761                                                                                 | 73                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 110.0                                                                             |                                                                                   | 0.0                                                                               | 120.0                                                                               |                                                                                     | 0.0                                                                                 | 30.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 0                                                                                 | 2                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 40.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   | 60.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 0.97                                                                              | 0.95                                                                              | 0.95                                                                              | 0.97                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.99                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.979                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     | 0.987                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3249                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3276                                                                                | 0                                                                                   |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 3257                                                                              | 3249                                                                              | 0                                                                                 | 3257                                                                                | 1767                                                                                | 1502                                                                                | 1679                                                                                | 3276                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 223                                                                               |                                                                                   | 14                                                                                |                                                                                   |                                                                                     |                                                                                     | 443                                                                                 |                                                                                     | 7                                                                                   |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                   | 396.5                                                                             |                                                                                   |                                                                                     | 239.9                                                                               |                                                                                     |                                                                                     | 411.0                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                   | 23.8                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 29                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 84                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 157                                                                               | 852                                                                               | 640                                                                               | 875                                                                               | 504                                                                               | 83                                                                                | 276                                                                                 | 296                                                                                 | 923                                                                                 | 75                                                                                  | 761                                                                                 | 73                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 157                                                                               | 852                                                                               | 640                                                                               | 875                                                                               | 587                                                                               | 0                                                                                 | 276                                                                                 | 296                                                                                 | 923                                                                                 | 75                                                                                  | 834                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                   | 7.4                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

1900/2000 City Park Drive  
3: Blair Road & Ogilvie Road

Tot 2037 PM

|                         |  |       |       |       |       |     |       |       |       |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    |     | Prot  | NA    | Perm  | Prot  | NA    |     |
| Protected Phases        | 5                                                                                  | 2     |       | 1     | 6     |     | 3     | 8     |       | 7     | 4     |     |
| Permitted Phases        |                                                                                    |       | 2     |       |       |     |       |       | 8     |       |       |     |
| Detector Phase          | 5                                                                                  | 2     | 2     | 1     | 6     |     | 3     | 8     | 8     | 7     | 4     |     |
| Switch Phase            |                                                                                    |       |       |       |       |     |       |       |       |       |       |     |
| Minimum Initial (s)     | 5.0                                                                                | 10.0  | 10.0  | 5.0   | 10.0  |     | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  |     |
| Minimum Split (s)       | 11.8                                                                               | 38.6  | 38.6  | 11.8  | 38.6  |     | 11.5  | 35.5  | 35.5  | 11.5  | 35.5  |     |
| Total Split (s)         | 25.0                                                                               | 41.0  | 41.0  | 37.0  | 53.0  |     | 21.0  | 41.0  | 41.0  | 21.0  | 41.0  |     |
| Total Split (%)         | 17.9%                                                                              | 29.3% | 29.3% | 26.4% | 37.9% |     | 15.0% | 29.3% | 29.3% | 15.0% | 29.3% |     |
| Maximum Green (s)       | 18.2                                                                               | 34.4  | 34.4  | 30.2  | 46.4  |     | 14.5  | 34.5  | 34.5  | 14.5  | 34.5  |     |
| Yellow Time (s)         | 3.7                                                                                | 3.3   | 3.3   | 3.7   | 3.3   |     | 4.2   | 4.2   | 4.2   | 4.2   | 4.2   |     |
| All-Red Time (s)        | 3.1                                                                                | 3.3   | 3.3   | 3.1   | 3.3   |     | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   |     |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 6.8                                                                                | 6.6   | 6.6   | 6.8   | 6.6   |     | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |     |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   |     | Lead  | Lag   | Lag   | Lead  | Lag   |     |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   |     | Yes   | Yes   | Yes   | Yes   | Yes   |     |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |
| Recall Mode             | None                                                                               | C-Max | C-Max | None  | C-Max |     | None  | None  | None  | None  | None  |     |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   |     |       | 7.0   | 7.0   |       | 7.0   |     |
| Flash Dont Walk (s)     |                                                                                    | 25.0  | 25.0  |       | 25.0  |     |       | 22.0  | 22.0  |       | 22.0  |     |
| Pedestrian Calls (#/hr) |                                                                                    | 30    | 30    |       | 30    |     |       | 35    | 35    |       | 35    |     |
| Act Effect Green (s)    | 16.5                                                                               | 34.4  | 34.4  | 30.2  | 48.1  |     | 14.2  | 37.7  | 37.7  | 11.3  | 34.8  |     |
| Actuated g/C Ratio      | 0.12                                                                               | 0.25  | 0.25  | 0.22  | 0.34  |     | 0.10  | 0.27  | 0.27  | 0.08  | 0.25  |     |
| v/c Ratio               | 0.79                                                                               | 1.03  | 1.19  | 1.25  | 0.52  |     | 0.84  | 0.62  | 1.27  | 0.56  | 1.02  |     |
| Control Delay           | 86.8                                                                               | 91.4  | 133.4 | 167.4 | 38.2  |     | 83.2  | 52.3  | 153.8 | 77.1  | 87.1  |     |
| Queue Delay             | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay             | 86.8                                                                               | 91.4  | 133.4 | 167.4 | 38.2  |     | 83.2  | 52.3  | 153.8 | 77.1  | 87.1  |     |
| LOS                     | F                                                                                  | F     | F     | F     | D     |     | F     | D     | F     | E     | F     |     |
| Approach Delay          |                                                                                    | 107.3 |       |       | 115.6 |     |       | 120.7 |       |       | 86.3  |     |
| Approach LOS            |                                                                                    | F     |       |       | F     |     |       | F     |       |       | F     |     |

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.27

Intersection Signal Delay: 109.6

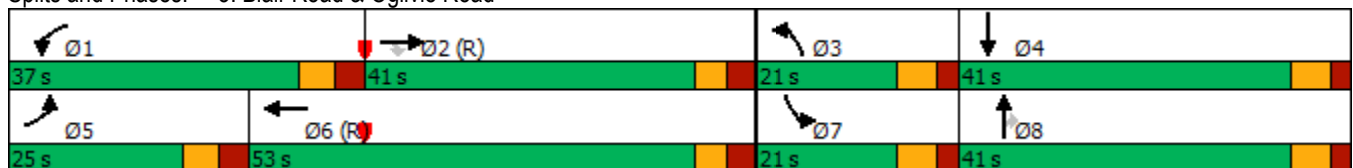
Intersection LOS: F

Intersection Capacity Utilization 109.9%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 3: Blair Road & Ogilvie Road



1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

Tot 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |                                                                                   |  |  |  |  |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 189                                                                               | 346                                                                                 | 1353                                                                                | 0                                                                                   | 0                                                                                   | 1815                                                                                | 172                                                                                 |
| Future Volume (vph)        | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 189                                                                               | 346                                                                                 | 1353                                                                                | 0                                                                                   | 0                                                                                   | 1815                                                                                | 172                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 0.0                                                                               |                                                                                   | 70.0                                                                              | 0.0                                                                               |                                                                                   | 70.0                                                                              | 60.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 50.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 7.6                                                                               |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                   | 100.0                                                                               |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.97                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.91                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1544                                                                              | 0                                                                                 | 1381                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4871                                                                                | 1517                                                                                |
| Flt Permitted              | 0.582                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 946                                                                               | 0                                                                                 | 1381                                                                              | 1695                                                                              | 1784                                                                              | 1517                                                                              | 3164                                                                                | 3262                                                                                | 0                                                                                   | 0                                                                                   | 4871                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 26                                                                                |                                                                                   |                                                                                   | 80                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 97                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 518.9                                                                             |                                                                                   |                                                                                   | 416.4                                                                             |                                                                                   |                                                                                     | 90.2                                                                                |                                                                                     |                                                                                     | 239.9                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 31.1                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 14.4                                                                                |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 12%                                                                               | 12%                                                                               | 12%                                                                               | 2%                                                                                | 2%                                                                                | 2%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 189                                                                               | 346                                                                                 | 1353                                                                                | 0                                                                                   | 0                                                                                   | 1815                                                                                | 172                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 123                                                                               | 0                                                                                 | 568                                                                               | 93                                                                                | 149                                                                               | 189                                                                               | 346                                                                                 | 1353                                                                                | 0                                                                                   | 0                                                                                   | 1815                                                                                | 172                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              |                                                                                   | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     |                                                                                     | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     |                                                                                     | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              |                                                                                   | pm+ov                                                                             | Perm                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                                | NA                                                                                  |                                                                                     |                                                                                     | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   | 8                                                                                 |                                                                                   | 5                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |

1900/2000 City Park Drive

6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off

Tot 2037 PM

| Lane Group              | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL | SBT   | SBR   |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Permitted Phases        | 4     |      | 4     | 8     |       | 8     |       |       |     |     |       | 6     |
| Detector Phase          | 4     |      | 5     | 8     | 8     | 8     | 5     | 2     |     |     | 6     | 6     |
| Switch Phase            |       |      |       |       |       |       |       |       |     |     |       |       |
| Minimum Initial (s)     | 10.0  |      | 5.0   | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  |     |     | 10.0  | 10.0  |
| Minimum Split (s)       | 16.8  |      | 11.4  | 36.8  | 36.8  | 36.8  | 11.4  | 30.1  |     |     | 30.1  | 30.1  |
| Total Split (s)         | 36.0  |      | 31.0  | 36.0  | 36.0  | 36.0  | 31.0  | 94.0  |     |     | 63.0  | 63.0  |
| Total Split (%)         | 27.7% |      | 23.8% | 27.7% | 27.7% | 27.7% | 23.8% | 72.3% |     |     | 48.5% | 48.5% |
| Maximum Green (s)       | 29.2  |      | 24.6  | 29.2  | 29.2  | 29.2  | 24.6  | 87.9  |     |     | 56.9  | 56.9  |
| Yellow Time (s)         | 3.3   |      | 4.2   | 3.3   | 3.3   | 3.3   | 4.2   | 4.2   |     |     | 4.2   | 4.2   |
| All-Red Time (s)        | 3.5   |      | 2.2   | 3.5   | 3.5   | 3.5   | 2.2   | 1.9   |     |     | 1.9   | 1.9   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.8   |      | 6.4   | 6.8   | 6.8   | 6.8   | 6.4   | 6.1   |     |     | 6.1   | 6.1   |
| Lead/Lag                |       |      | Lead  |       |       |       | Lead  |       |     |     | Lag   | Lag   |
| Lead-Lag Optimize?      |       |      | Yes   |       |       |       | Yes   |       |     |     | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     |     | 3.0   | 3.0   |
| Recall Mode             | None  |      | None  | None  | None  | None  | None  | C-Max |     |     | C-Max | C-Max |
| Walk Time (s)           |       |      |       | 7.0   | 7.0   | 7.0   |       | 7.0   |     |     | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |      |       | 23.0  | 23.0  | 23.0  |       | 17.0  |     |     | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |       |      |       | 20    | 20    | 20    |       | 30    |     |     | 30    | 30    |
| Act Effct Green (s)     | 23.3  |      | 58.6  | 23.3  | 23.3  | 23.3  | 28.5  | 93.8  |     |     | 58.9  | 58.9  |
| Actuated g/C Ratio      | 0.18  |      | 0.45  | 0.18  | 0.18  | 0.18  | 0.22  | 0.72  |     |     | 0.45  | 0.45  |
| v/c Ratio               | 0.73  |      | 0.89  | 0.31  | 0.47  | 0.56  | 0.50  | 0.58  |     |     | 0.82  | 0.23  |
| Control Delay           | 72.8  |      | 48.9  | 46.8  | 51.0  | 32.7  | 48.4  | 10.8  |     |     | 35.5  | 10.8  |
| Queue Delay             | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |     | 0.0   | 0.0   |
| Total Delay             | 72.8  |      | 48.9  | 46.8  | 51.0  | 32.7  | 48.4  | 10.8  |     |     | 35.5  | 10.8  |
| LOS                     | E     |      | D     | D     | D     | C     | D     | B     |     |     | D     | B     |
| Approach Delay          |       | 53.1 |       |       | 42.1  |       |       | 18.5  |     |     | 33.3  |       |
| Approach LOS            |       | D    |       |       | D     |       |       | B     |     |     | C     |       |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 50 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 31.7

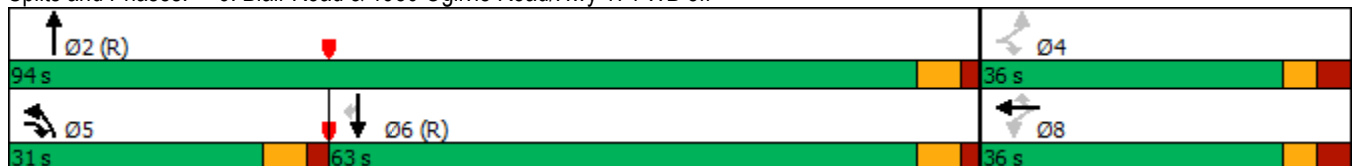
Intersection LOS: C

Intersection Capacity Utilization 98.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: Blair Road & 1980 Ogilvie Road/Hwy 174 WB off



1900/2000 City Park Drive  
7: 1980 Ogilvie Road

Tot 2037 PM

|                                        |  |  |  |  |  |  |
|----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                             | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations                    |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Future Volume (vph)                    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Ideal Flow (vphpl)                     | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Lane Util. Factor                      | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Fr t                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                      | 1784                                                                              | 0                                                                                 | 1784                                                                              | 0                                                                                 | 0                                                                                 | 1784                                                                              |
| Flt Permitted                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                      | 1784                                                                              | 0                                                                                 | 1784                                                                              | 0                                                                                 | 0                                                                                 | 1784                                                                              |
| Link Speed (k/h)                       | 60                                                                                |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |
| Link Distance (m)                      | 518.9                                                                             |                                                                                   | 235.1                                                                             |                                                                                   |                                                                                   | 57.3                                                                              |
| Travel Time (s)                        | 31.1                                                                              |                                                                                   | 14.1                                                                              |                                                                                   |                                                                                   | 3.4                                                                               |
| Peak Hour Factor                       | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Adj. Flow (vph)                        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Shared Lane Traffic (%)                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)                  | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Enter Blocked Intersection             | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                         | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(m)                        | 3.7                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Link Offset(m)                         | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |
| Crosswalk Width(m)                     | 4.9                                                                               |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |
| Two way Left Turn Lane                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor                         | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)                    | 24                                                                                | 14                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   |
| Sign Control                           | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                             | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                          | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization 0.0% | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Analysis Period (min) 15               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

## 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie &amp; Ogilvie Road

Tot 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                     |  |  |  |  |  |
| Traffic Volume (vph)       | 32                                                                                | 1484                                                                              | 152                                                                               | 191                                                                               | 603                                                                               | 38                                                                                | 183                                                                                 | 10                                                                                  | 185                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Future Volume (vph)        | 32                                                                                | 1484                                                                              | 152                                                                               | 191                                                                               | 603                                                                               | 38                                                                                | 183                                                                                 | 10                                                                                  | 185                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                 |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.89                                                                              |                                                                                   | 0.87                                                                              |                                                                                   |                                                                                   | 0.73                                                                              |                                                                                     | 0.93                                                                                | 0.87                                                                                | 0.91                                                                                |                                                                                     | 0.92                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.955                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                   | 1609                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.424                                                                             |                                                                                   |                                                                                   | 0.079                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.723                                                                               |                                                                                     | 0.558                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 675                                                                               | 3390                                                                              | 1315                                                                              | 140                                                                               | 3357                                                                              | 1104                                                                              | 0                                                                                   | 1135                                                                                | 1244                                                                                | 906                                                                                 | 1784                                                                                | 1388                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 152                                                                               |                                                                                   |                                                                                   | 60                                                                                |                                                                                     |                                                                                     | 185                                                                                 |                                                                                     |                                                                                     | 99                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                     | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 145                                                                               |                                                                                   | 67                                                                                | 67                                                                                |                                                                                   | 145                                                                               | 67                                                                                  |                                                                                     | 110                                                                                 | 110                                                                                 |                                                                                     | 67                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                  | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 32                                                                                | 1484                                                                              | 152                                                                               | 191                                                                               | 603                                                                               | 38                                                                                | 183                                                                                 | 10                                                                                  | 185                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 32                                                                                | 1484                                                                              | 152                                                                               | 191                                                                               | 603                                                                               | 38                                                                                | 0                                                                                   | 193                                                                                 | 185                                                                                 | 78                                                                                  | 19                                                                                  | 76                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie & Ogilvie Road

Tot 2037 PM

|                         | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Turn Type               | Perm  | NA    | Perm  | pm+pt | NA    | Perm  | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases        |       | 2     |       | 1     | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases        | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 1     | 6     | 6     | 8     | 8     | 8     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 35.1  | 35.1  | 35.1  | 9.0   | 35.1  | 35.1  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  |
| Total Split (s)         | 46.0  | 46.0  | 46.0  | 15.0  | 61.0  | 61.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)         | 46.0% | 46.0% | 46.0% | 15.0% | 61.0% | 61.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% | 34.0% |
| Maximum Green (s)       | 39.9  | 39.9  | 39.9  | 11.0  | 54.9  | 54.9  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.0   | 3.7   | 3.7   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.4   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.1   | 6.1   | 6.1   | 4.0   | 6.1   | 6.1   |       | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lead  |       |       | Lag   | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Flash Dont Walk (s)     | 22.0  | 22.0  | 22.0  |       | 22.0  | 22.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) | 35    | 35    | 35    |       | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    |
| Act Effect Green (s)    | 47.8  | 47.8  | 47.8  | 63.9  | 61.8  | 61.8  |       | 22.6  | 22.6  | 22.6  | 22.6  | 22.6  |
| Actuated g/C Ratio      | 0.48  | 0.48  | 0.48  | 0.64  | 0.62  | 0.62  |       | 0.23  | 0.23  | 0.23  | 0.23  | 0.23  |
| v/c Ratio               | 0.10  | 0.92  | 0.21  | 0.78  | 0.29  | 0.05  |       | 0.75  | 0.44  | 0.38  | 0.05  | 0.19  |
| Control Delay           | 9.7   | 27.5  | 1.2   | 42.5  | 10.6  | 1.4   |       | 53.9  | 7.9   | 36.6  | 27.6  | 4.5   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 9.7   | 27.5  | 1.2   | 42.5  | 10.6  | 1.4   |       | 53.9  | 7.9   | 36.6  | 27.6  | 4.5   |
| LOS                     | A     | C     | A     | D     | B     | A     |       | D     | A     | D     | C     | A     |
| Approach Delay          |       | 24.8  |       |       | 17.5  |       |       | 31.4  |       |       | 21.5  |       |
| Approach LOS            |       | C     |       |       | B     |       |       | C     |       |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 30 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 23.4

Intersection LOS: C

Intersection Capacity Utilization 102.6%

ICU Level of Service G

Analysis Period (min) 15

### Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

## 1900/2000 City Park Drive

## 12: 1900 Ogilvie Road/1929 Ogilvie Road &amp; Ogilvie Road

Tot 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                  | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Future Volume (vph)        | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                  | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 60.0                                                                              |                                                                                   | 80.0                                                                              | 90.0                                                                              |                                                                                   | 0.0                                                                               | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 20.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.953                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3345                                                                              | 0                                                                                 | 1695                                                                                | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1700                                                                                | 1517                                                                                |
| Flt Permitted              | 0.289                                                                             |                                                                                   |                                                                                   | 0.131                                                                             |                                                                                   |                                                                                   | 0.669                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.708                                                                               |                                                                                     |
| Satd. Flow (perm)          | 516                                                                               | 3390                                                                              | 1517                                                                              | 231                                                                               | 3345                                                                              | 0                                                                                 | 1194                                                                                | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1263                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 66                                                                                |                                                                                   | 5                                                                                 |                                                                                   |                                                                                     | 28                                                                                  |                                                                                     |                                                                                     |                                                                                     | 132                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                     | 86.0                                                                                |                                                                                     |                                                                                     | 56.6                                                                                |                                                                                     |
| Travel Time (s)            |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                     | 5.2                                                                                 |                                                                                     |                                                                                     | 3.4                                                                                 |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 2%                                                                                | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 861                                                                               | 24                                                                                | 47                                                                                  | 3                                                                                   | 28                                                                                  | 135                                                                                 | 3                                                                                   | 132                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 43                                                                                | 1428                                                                              | 66                                                                                | 32                                                                                | 885                                                                               | 0                                                                                 | 47                                                                                  | 31                                                                                  | 0                                                                                   | 0                                                                                   | 138                                                                                 | 132                                                                                 |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                                | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |

# 1900/2000 City Park Drive

12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road

Tot 2037 PM

|                         | ↖     | →     | ↗     | ↖     | ←     | ↖   | ↖     | ↑     | ↗   | ↘     | ↓     | ↙     |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
| Permitted Phases        | 2     |       | 2     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 2     | 2     | 2     | 6     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 29.9  | 29.9  | 29.9  | 29.9  | 29.9  |     | 36.7  | 36.7  |     | 36.7  | 36.7  | 36.7  |
| Total Split (s)         | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  |     | 37.0  | 37.0  |     | 37.0  | 37.0  | 37.0  |
| Total Split (%)         | 63.0% | 63.0% | 63.0% | 63.0% | 63.0% |     | 37.0% | 37.0% |     | 37.0% | 37.0% | 37.0% |
| Maximum Green (s)       | 57.1  | 57.1  | 57.1  | 57.1  | 57.1  |     | 30.3  | 30.3  |     | 30.3  | 30.3  | 30.3  |
| Yellow Time (s)         | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   |     | 3.3   | 3.3   |     | 3.3   | 3.3   | 3.3   |
| All-Red Time (s)        | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   |     | 3.4   | 3.4   |     | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   |     | 6.7   | 6.7   |     |       | 6.7   | 6.7   |
| Lead/Lag                |       |       |       |       |       |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | C-Max | C-Max | C-Max | C-Max | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |     | 23.0  | 23.0  |     | 23.0  | 23.0  | 23.0  |
| Pedestrian Calls (#/hr) | 20    | 20    | 20    | 20    | 20    |     | 30    | 30    |     | 30    | 30    | 30    |
| Act Effct Green (s)     | 64.7  | 64.7  | 64.7  | 64.7  | 64.7  |     | 22.7  | 22.7  |     |       | 22.7  | 22.7  |
| Actuated g/C Ratio      | 0.65  | 0.65  | 0.65  | 0.65  | 0.65  |     | 0.23  | 0.23  |     |       | 0.23  | 0.23  |
| v/c Ratio               | 0.13  | 0.65  | 0.07  | 0.21  | 0.41  |     | 0.17  | 0.08  |     |       | 0.48  | 0.30  |
| Control Delay           | 5.8   | 8.4   | 0.7   | 10.5  | 6.8   |     | 28.9  | 11.0  |     |       | 37.2  | 6.6   |
| Queue Delay             | 0.0   | 0.1   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 5.8   | 8.5   | 0.7   | 10.5  | 6.8   |     | 28.9  | 11.0  |     |       | 37.2  | 6.6   |
| LOS                     | A     | A     | A     | B     | A     |     | C     | B     |     |       | D     | A     |
| Approach Delay          |       | 8.1   |       |       | 7.0   |     |       | 21.8  |     |       | 22.2  |       |
| Approach LOS            |       | A     |       |       | A     |     |       | C     |     |       | C     |       |

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 9.4

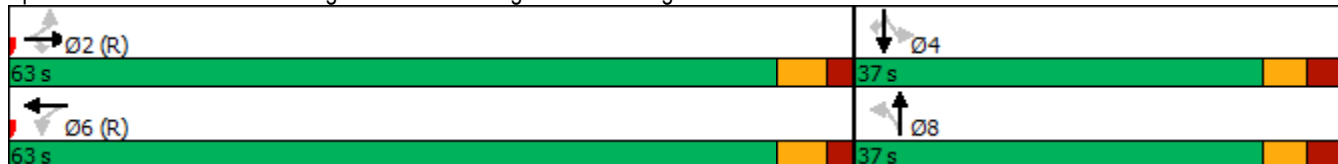
Intersection LOS: A

Intersection Capacity Utilization 66.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 12: 1900 Ogilvie Road/1929 Ogilvie Road & Ogilvie Road



## 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive &amp; Ogilvie Road

Tot 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 207                                                                               | 1061                                                                              | 194                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 127                                                                                 | 66                                                                                  | 26                                                                                  | 140                                                                                 | 46                                                                                  | 159                                                                                 |
| Future Volume (vph)        | 207                                                                               | 1061                                                                              | 194                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 127                                                                                 | 66                                                                                  | 26                                                                                  | 140                                                                                 | 46                                                                                  | 159                                                                                 |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 40.0                                                                              | 45.0                                                                              |                                                                                   | 70.0                                                                              | 30.0                                                                                |                                                                                     | 0.0                                                                                 | 20.0                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                                |                                                                                     |                                                                                     | 25.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.97                                                                              |                                                                                   | 0.90                                                                              |                                                                                   |                                                                                   | 0.83                                                                              | 0.98                                                                                | 0.99                                                                                |                                                                                     | 0.98                                                                                | 0.97                                                                                |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     | 0.958                                                                               |                                                                                     |                                                                                     | 0.884                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 1631                                                                                | 1630                                                                                | 0                                                                                   | 1647                                                                                | 1487                                                                                | 0                                                                                   |
| Flt Permitted              | 0.225                                                                             |                                                                                   |                                                                                   | 0.244                                                                             |                                                                                   |                                                                                   | 0.543                                                                               |                                                                                     |                                                                                     | 0.697                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 385                                                                               | 3357                                                                              | 1349                                                                              | 431                                                                               | 3357                                                                              | 1248                                                                              | 914                                                                                 | 1630                                                                                | 0                                                                                   | 1186                                                                                | 1487                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 121                                                                               |                                                                                   |                                                                                   | 121                                                                               |                                                                                     | 20                                                                                  |                                                                                     |                                                                                     | 159                                                                                 |                                                                                     |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                   | 190.5                                                                             |                                                                                   |                                                                                     | 345.6                                                                               |                                                                                     |                                                                                     | 177.6                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                     | 20.7                                                                                |                                                                                     |                                                                                     | 10.7                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 73                                                                                |                                                                                   | 40                                                                                | 40                                                                                |                                                                                   | 73                                                                                | 27                                                                                  |                                                                                     | 21                                                                                  | 21                                                                                  |                                                                                     | 27                                                                                  |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 6%                                                                                  | 6%                                                                                  | 6%                                                                                  | 5%                                                                                  | 5%                                                                                  | 5%                                                                                  |
| Adj. Flow (vph)            | 207                                                                               | 1061                                                                              | 194                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 127                                                                                 | 66                                                                                  | 26                                                                                  | 140                                                                                 | 46                                                                                  | 159                                                                                 |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 207                                                                               | 1061                                                                              | 194                                                                               | 12                                                                                | 839                                                                               | 110                                                                               | 127                                                                                 | 92                                                                                  | 0                                                                                   | 140                                                                                 | 205                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                |                                                                                     |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 1900/2000 City Park Drive

## 15: City Park Drive/Bathgate Drive & Ogilvie Road

Tot 2037 PM

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | pm+pt                                                                             | NA                                                                                | Perm                                                                              | pm+pt                                                                             | NA                                                                                | Perm                                                                              | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        | 2                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                  | 8                                                                                   |                                                                                     | 4                                                                                   | 4                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                               | 10.0                                                                                |                                                                                     | 10.0                                                                                | 10.0                                                                                |                                                                                     |
| Minimum Split (s)       | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 9.7                                                                               | 30.0                                                                              | 30.0                                                                              | 37.4                                                                               | 37.4                                                                                |                                                                                     | 37.4                                                                                | 37.4                                                                                |                                                                                     |
| Total Split (s)         | 20.0                                                                              | 37.0                                                                              | 37.0                                                                              | 20.0                                                                              | 37.0                                                                              | 37.0                                                                              | 38.0                                                                               | 38.0                                                                                |                                                                                     | 38.0                                                                                | 38.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 37.0%                                                                             | 37.0%                                                                             | 20.0%                                                                             | 37.0%                                                                             | 37.0%                                                                             | 38.0%                                                                              | 38.0%                                                                               |                                                                                     | 38.0%                                                                               | 38.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 15.3                                                                              | 31.0                                                                              | 31.0                                                                              | 15.3                                                                              | 31.0                                                                              | 31.0                                                                              | 30.6                                                                               | 30.6                                                                                |                                                                                     | 30.6                                                                                | 30.6                                                                                |                                                                                     |
| Yellow Time (s)         | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 1.0                                                                               | 2.3                                                                               | 2.3                                                                               | 4.4                                                                                | 4.4                                                                                 |                                                                                     | 4.4                                                                                 | 4.4                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 4.7                                                                               | 6.0                                                                               | 6.0                                                                               | 7.4                                                                                | 7.4                                                                                 |                                                                                     | 7.4                                                                                 | 7.4                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                | Lag                                                                                 |                                                                                     | Lag                                                                                 | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                               | None                                                                                |                                                                                     | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              | 28.0                                                                               | 28.0                                                                                |                                                                                     | 28.0                                                                                | 28.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   | 30                                                                                | 30                                                                                | 20                                                                                 | 20                                                                                  |                                                                                     | 20                                                                                  | 20                                                                                  |                                                                                     |
| Act Effect Green (s)    | 62.4                                                                              | 58.8                                                                              | 58.8                                                                              | 52.4                                                                              | 45.2                                                                              | 45.2                                                                              | 20.5                                                                               | 20.5                                                                                |                                                                                     | 20.5                                                                                | 20.5                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.62                                                                              | 0.59                                                                              | 0.59                                                                              | 0.52                                                                              | 0.45                                                                              | 0.45                                                                              | 0.20                                                                               | 0.20                                                                                |                                                                                     | 0.20                                                                                | 0.20                                                                                |                                                                                     |
| v/c Ratio               | 0.54                                                                              | 0.54                                                                              | 0.23                                                                              | 0.04                                                                              | 0.55                                                                              | 0.17                                                                              | 0.68                                                                               | 0.26                                                                                |                                                                                     | 0.58                                                                                | 0.48                                                                                |                                                                                     |
| Control Delay           | 21.0                                                                              | 14.6                                                                              | 7.8                                                                               | 8.8                                                                               | 16.6                                                                              | 2.0                                                                               | 52.8                                                                               | 25.1                                                                                |                                                                                     | 43.4                                                                                | 11.9                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 21.0                                                                              | 14.6                                                                              | 7.8                                                                               | 8.8                                                                               | 16.6                                                                              | 2.0                                                                               | 52.8                                                                               | 25.1                                                                                |                                                                                     | 43.4                                                                                | 11.9                                                                                |                                                                                     |
| LOS                     | C                                                                                 | B                                                                                 | A                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | D                                                                                  | C                                                                                   |                                                                                     | D                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 14.6                                                                              |                                                                                   |                                                                                   | 14.8                                                                              |                                                                                   |                                                                                    | 41.2                                                                                |                                                                                     |                                                                                     | 24.7                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | D                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 19 (19%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 17.8

Intersection LOS: B

Intersection Capacity Utilization 87.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: City Park Drive/Bathgate Drive & Ogilvie Road



1900/2000 City Park Drive  
15: City Park Drive/Bathgate Drive & Ogilvie Road

Tot 2037 PM

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | Ped  | Ped  |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 20   | 20   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

## 1900/2000 City Park Drive

## 18: Residential/Cadboro Road &amp; Ogilvie Road

Tot 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                     |                                                                                     |  |                                                                                     |                                                                                     |  |
| Traffic Volume (vph)       | 0                                                                                 | 1862                                                                              | 14                                                                                | 0                                                                                 | 1229                                                                              | 70                                                                                | 0                                                                                   | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Future Volume (vph)        | 0                                                                                 | 1862                                                                              | 14                                                                                | 0                                                                                 | 1229                                                                              | 70                                                                                | 0                                                                                   | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Fr't                       |                                                                                   | 0.999                                                                             |                                                                                   |                                                                                   | 0.992                                                                             |                                                                                   |                                                                                     |                                                                                     | 0.865                                                                               |                                                                                     |                                                                                     | 0.865                                                                               |
| Flt Protected              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3363                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 3387                                                                              | 0                                                                                 | 0                                                                                 | 3363                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1543                                                                                | 0                                                                                   | 0                                                                                   | 1543                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   | 9                                                                                 |                                                                                   |                                                                                     |                                                                                     | 33                                                                                  |                                                                                     |                                                                                     | 52                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                   | 257.6                                                                             |                                                                                   |                                                                                     | 90.1                                                                                |                                                                                     |                                                                                     | 116.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                   | 15.5                                                                              |                                                                                   |                                                                                     | 5.4                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj. Flow (vph)            | 0                                                                                 | 1862                                                                              | 14                                                                                | 0                                                                                 | 1229                                                                              | 70                                                                                | 0                                                                                   | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 1876                                                                              | 0                                                                                 | 0                                                                                 | 1299                                                                              | 0                                                                                 | 0                                                                                   | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 97                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                     | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 97                                                                                |                                                                                   | 97                                                                                | 97                                                                                |                                                                                   | 97                                                                                | 97                                                                                  |                                                                                     | 97                                                                                  | 97                                                                                  |                                                                                     | 97                                                                                  |
| Number of Detectors        |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Detector Template          |                                                                                   | Thru                                                                              |                                                                                   |                                                                                   | Thru                                                                              |                                                                                   |                                                                                     |                                                                                     | Right                                                                               |                                                                                     |                                                                                     | Right                                                                               |
| Leading Detector (m)       |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Trailing Detector (m)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Position(m)     |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     | 2.0                                                                                 |
| Detector 1 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Queue (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 1 Delay (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                   | 9.4                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                   | 0.6                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type                  |                                                                                   | NA                                                                                |                                                                                   |                                                                                   | NA                                                                                |                                                                                   |                                                                                     |                                                                                     | Perm                                                                                |                                                                                     |                                                                                     | Perm                                                                                |
| Protected Phases           |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Permitted Phases           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Detector Phase             |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                     |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |

1900/2000 City Park Drive  
18: Residential/Cadboro Road & Ogilvie Road

Tot 2037 PM

|                         | ↖   | →     | ↘   | ↙   | ←     | ↖   | ↙   | ↑   | ↗     | ↘   | ↓    | ↙     |
|-------------------------|-----|-------|-----|-----|-------|-----|-----|-----|-------|-----|------|-------|
| Lane Group              | EBL | EBT   | EBR | WBL | WBT   | WBR | NBL | NBT | NBR   | SBL | SBT  | SBR   |
| Minimum Split (s)       |     | 35.0  |     |     | 35.0  |     |     |     | 40.0  |     |      | 40.0  |
| Total Split (s)         |     | 60.0  |     |     | 60.0  |     |     |     | 40.0  |     |      | 40.0  |
| Total Split (%)         |     | 60.0% |     |     | 60.0% |     |     |     | 40.0% |     |      | 40.0% |
| Maximum Green (s)       |     | 54.0  |     |     | 54.0  |     |     |     | 36.0  |     |      | 36.0  |
| Yellow Time (s)         |     | 3.7   |     |     | 3.7   |     |     |     | 3.0   |     |      | 3.0   |
| All-Red Time (s)        |     | 2.3   |     |     | 2.3   |     |     |     | 1.0   |     |      | 1.0   |
| Lost Time Adjust (s)    |     | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |      | 0.0   |
| Total Lost Time (s)     |     | 6.0   |     |     | 6.0   |     |     |     | 4.0   |     |      | 4.0   |
| Lead/Lag                |     |       |     |     |       |     |     |     |       |     |      |       |
| Lead-Lag Optimize?      |     |       |     |     |       |     |     |     |       |     |      |       |
| Vehicle Extension (s)   |     | 3.0   |     |     | 3.0   |     |     |     | 3.0   |     |      | 3.0   |
| Recall Mode             |     | C-Max |     |     | C-Max |     |     |     | None  |     |      | None  |
| Walk Time (s)           |     | 15.0  |     |     | 15.0  |     |     |     | 24.0  |     |      | 24.0  |
| Flash Dont Walk (s)     |     | 14.0  |     |     | 14.0  |     |     |     | 12.0  |     |      | 12.0  |
| Pedestrian Calls (#/hr) |     | 30    |     |     | 30    |     |     |     | 20    |     |      | 20    |
| Act Effct Green (s)     |     | 74.6  |     |     | 74.6  |     |     |     | 18.5  |     |      | 18.5  |
| Actuated g/C Ratio      |     | 0.75  |     |     | 0.75  |     |     |     | 0.18  |     |      | 0.18  |
| v/c Ratio               |     | 0.74  |     |     | 0.52  |     |     |     | 0.00  |     |      | 0.30  |
| Control Delay           |     | 15.8  |     |     | 9.3   |     |     |     | 0.0   |     |      | 16.5  |
| Queue Delay             |     | 0.0   |     |     | 0.0   |     |     |     | 0.0   |     |      | 0.0   |
| Total Delay             |     | 15.8  |     |     | 9.3   |     |     |     | 0.0   |     |      | 16.5  |
| LOS                     |     | B     |     |     | A     |     |     |     | A     |     |      | B     |
| Approach Delay          |     | 15.8  |     |     | 9.3   |     |     |     |       |     | 16.5 |       |
| Approach LOS            |     | B     |     |     | A     |     |     |     |       |     | B    |       |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 4 (4%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 13.2

Intersection LOS: B

Intersection Capacity Utilization 67.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 18: Residential/Cadboro Road & Ogilvie Road

|          |      |
|----------|------|
| → Ø2 (R) | ↖ Ø4 |
| 60 s     | 40 s |
| ← Ø6 (R) | ↗ Ø8 |
| 60 s     | 40 s |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

Tot 2037 PM

| Lane Group                 | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |
| Traffic Volume (vph)       | 237   | 1017  | 844   | 189   | 490   | 1015  |
| Future Volume (vph)        | 237   | 1017  | 844   | 189   | 490   | 1015  |
| Ideal Flow (vphpl)         | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  |
| Storage Length (m)         | 0.0   | 0.0   |       | 70.0  | 0.0   |       |
| Storage Lanes              | 1     | 1     |       | 1     | 0     |       |
| Taper Length (m)           | 7.6   |       |       |       | 7.6   |       |
| Lane Util. Factor          | 1.00  | 1.00  | 0.95  | 1.00  | 0.95  | 0.95  |
| Frt                        |       | 0.850 |       | 0.850 |       |       |
| Flt Protected              | 0.950 |       |       |       |       | 0.984 |
| Satd. Flow (prot)          | 1647  | 1473  | 3325  | 1488  | 0     | 3210  |
| Flt Permitted              | 0.950 |       |       |       |       | 0.519 |
| Satd. Flow (perm)          | 1647  | 1473  | 3325  | 1488  | 0     | 1693  |
| Right Turn on Red          |       | Yes   |       | Yes   |       |       |
| Satd. Flow (RTOR)          |       | 582   |       | 189   |       |       |
| Link Speed (k/h)           | 60    |       | 60    |       |       | 60    |
| Link Distance (m)          | 216.4 |       | 230.9 |       |       | 341.9 |
| Travel Time (s)            | 13.0  |       | 13.9  |       |       | 20.5  |
| Peak Hour Factor           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Heavy Vehicles (%)         | 5%    | 5%    | 4%    | 4%    | 6%    | 6%    |
| Adj. Flow (vph)            | 237   | 1017  | 844   | 189   | 490   | 1015  |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 237   | 1017  | 844   | 189   | 0     | 1505  |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Right | Left  | Right | Left  | Left  |
| Median Width(m)            | 3.7   |       | 0.0   |       |       | 0.0   |
| Link Offset(m)             | 0.0   |       | 0.0   |       |       | 0.0   |
| Crosswalk Width(m)         | 4.9   |       | 4.9   |       |       | 4.9   |
| Two way Left Turn Lane     |       |       |       |       |       |       |
| Headway Factor             | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  |
| Turning Speed (k/h)        | 24    | 14    |       | 14    | 24    |       |
| Number of Detectors        | 1     | 1     | 2     | 1     | 1     | 2     |
| Detector Template          | Left  | Right | Thru  | Right | Left  | Thru  |
| Leading Detector (m)       | 6.1   | 6.1   | 30.5  | 6.1   | 6.1   | 30.5  |
| Trailing Detector (m)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 1 Position(m)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 1 Size(m)         | 6.1   | 6.1   | 1.8   | 6.1   | 6.1   | 1.8   |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(m)     |       |       | 28.7  |       |       | 28.7  |
| Detector 2 Size(m)         |       |       | 1.8   |       |       | 1.8   |
| Detector 2 Type            |       |       | Cl+Ex |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       | 0.0   |       |       | 0.0   |
| Turn Type                  | Prot  | Free  | NA    | pm+ov | pm+pt | NA    |
| Protected Phases           | 8     |       | 2     | 8     | 1     | 6     |

1900/2000 City Park Drive  
22: Blair Road & Hwy 174 EB off

Tot 2037 PM



| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Permitted Phases        | Free  |       |       | 2     | 6     |       |
| Detector Phase          | 8     |       | 2     | 8     | 1     | 6     |
| Switch Phase            |       |       |       |       |       |       |
| Minimum Initial (s)     | 5.0   |       | 10.0  | 5.0   | 5.0   | 1.0   |
| Minimum Split (s)       | 25.3  |       | 30.5  | 25.3  | 11.0  | 30.5  |
| Total Split (s)         | 30.0  |       | 52.0  | 30.0  | 28.0  | 80.0  |
| Total Split (%)         | 27.3% |       | 47.3% | 27.3% | 25.5% | 72.7% |
| Maximum Green (s)       | 23.7  |       | 45.5  | 23.7  | 22.0  | 73.5  |
| Yellow Time (s)         | 3.3   |       | 4.2   | 3.3   | 4.2   | 4.2   |
| All-Red Time (s)        | 3.0   |       | 2.3   | 3.0   | 1.8   | 2.3   |
| Lost Time Adjust (s)    | 0.0   |       | 0.0   | 0.0   |       | 0.0   |
| Total Lost Time (s)     | 6.3   |       | 6.5   | 6.3   |       | 6.5   |
| Lead/Lag                |       |       | Lag   |       | Lead  |       |
| Lead-Lag Optimize?      |       |       | Yes   |       | Yes   |       |
| Vehicle Extension (s)   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  |       | C-Max | None  | Max   | C-Max |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 12.0  |       | 17.0  | 12.0  |       | 17.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     | 0     |       | 0     |
| Act Effect Green (s)    | 20.0  | 110.0 | 45.5  | 72.0  |       | 77.2  |
| Actuated g/C Ratio      | 0.18  | 1.00  | 0.41  | 0.65  |       | 0.70  |
| v/c Ratio               | 0.80  | 0.69  | 0.61  | 0.18  |       | 0.98  |
| Control Delay           | 61.9  | 2.7   | 27.7  | 1.2   |       | 32.4  |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay             | 61.9  | 2.7   | 27.7  | 1.2   |       | 32.4  |
| LOS                     | E     | A     | C     | A     |       | C     |
| Approach Delay          | 13.9  |       | 22.9  |       |       | 32.4  |
| Approach LOS            | B     |       | C     |       |       | C     |

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 23.7

Intersection LOS: C

Intersection Capacity Utilization 99.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 22: Blair Road & Hwy 174 EB off



1900/2000 City Park Drive  
25: Blair Road

Tot 2037 PM

|                                        |  |  |  |  |  |  |
|----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                             | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations                    |                                                                                   |                                                                                   |                                                                                   | ↑↑                                                                                | ↑↑                                                                                | ↑                                                                                 |
| Traffic Volume (vph)                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Future Volume (vph)                    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Ideal Flow (vphpl)                     | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Lane Util. Factor                      | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              |
| Fr't                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                      | 0                                                                                 | 0                                                                                 | 0                                                                                 | 3390                                                                              | 3390                                                                              | 1784                                                                              |
| Flt Permitted                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                      | 0                                                                                 | 0                                                                                 | 0                                                                                 | 3390                                                                              | 3390                                                                              | 1784                                                                              |
| Link Speed (k/h)                       | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   |
| Link Distance (m)                      | 105.8                                                                             |                                                                                   |                                                                                   | 341.9                                                                             | 90.2                                                                              |                                                                                   |
| Travel Time (s)                        | 6.3                                                                               |                                                                                   |                                                                                   | 20.5                                                                              | 5.4                                                                               |                                                                                   |
| Peak Hour Factor                       | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Adj. Flow (vph)                        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Shared Lane Traffic (%)                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)                  | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Enter Blocked Intersection             | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                         | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Left                                                                              | Right                                                                             |
| Median Width(m)                        | 0.0                                                                               |                                                                                   |                                                                                   | 7.4                                                                               | 7.4                                                                               |                                                                                   |
| Link Offset(m)                         | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   |
| Crosswalk Width(m)                     | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               | 1.6                                                                               |                                                                                   |
| Two way Left Turn Lane                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor                         | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              |
| Turning Speed (k/h)                    | 24                                                                                | 14                                                                                | 24                                                                                |                                                                                   |                                                                                   | 14                                                                                |
| Sign Control                           | Yield                                                                             |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| Intersection Summary                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                             | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                          | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization 0.0% | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Analysis Period (min) 15               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

## 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road &amp; Ogilvie Road

Tot 2037 PM

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)       | 188                                                                               | 1740                                                                              | 61                                                                                | 94                                                                                | 1343                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Future Volume (vph)        | 188                                                                               | 1740                                                                              | 61                                                                                | 94                                                                                | 1343                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 70.0                                                                              |                                                                                   | 0.0                                                                               | 70.0                                                                              |                                                                                   | 0.0                                                                               | 15.0                                                                                |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 35.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 7.6                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                                | 0.98                                                                                |                                                                                     |                                                                                     | 0.99                                                                                | 0.99                                                                                |
| Frt                        |                                                                                   | 0.995                                                                             |                                                                                   |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                     | 0.864                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.958                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3362                                                                              | 0                                                                                 | 1695                                                                              | 3369                                                                              | 0                                                                                 | 1662                                                                                | 1476                                                                                | 0                                                                                   | 0                                                                                   | 1709                                                                                | 1517                                                                                |
| Flt Permitted              | 0.127                                                                             |                                                                                   |                                                                                   | 0.067                                                                             |                                                                                   |                                                                                   | 0.736                                                                               |                                                                                     |                                                                                     |                                                                                     | 0.721                                                                               |                                                                                     |
| Satd. Flow (perm)          | 227                                                                               | 3362                                                                              | 0                                                                                 | 120                                                                               | 3369                                                                              | 0                                                                                 | 1267                                                                                | 1476                                                                                | 0                                                                                   | 0                                                                                   | 1274                                                                                | 1497                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 3                                                                                 |                                                                                   |                                                                                     | 39                                                                                  |                                                                                     |                                                                                     |                                                                                     | 96                                                                                  |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     |                                                                                     | 60                                                                                  |
| Link Distance (m)          |                                                                                   | 314.1                                                                             |                                                                                   |                                                                                   | 264.5                                                                             |                                                                                   |                                                                                     | 176.2                                                                               |                                                                                     |                                                                                     |                                                                                     | 174.1                                                                               |
| Travel Time (s)            |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                   | 15.9                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     |                                                                                     | 10.4                                                                                |
| Confl. Peds. (#/hr)        | 24                                                                                |                                                                                   | 34                                                                                | 34                                                                                |                                                                                   | 24                                                                                | 16                                                                                  |                                                                                     | 11                                                                                  | 11                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 22                                                                                |                                                                                     |                                                                                     | 3                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                  | 4%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 188                                                                               | 1740                                                                              | 61                                                                                | 94                                                                                | 1343                                                                              | 38                                                                                | 52                                                                                  | 4                                                                                   | 39                                                                                  | 29                                                                                  | 4                                                                                   | 96                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 188                                                                               | 1801                                                                              | 0                                                                                 | 94                                                                                | 1381                                                                              | 0                                                                                 | 52                                                                                  | 43                                                                                  | 0                                                                                   | 0                                                                                   | 33                                                                                  | 96                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                |                                                                                     | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 |                                                                                     | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 1900/2000 City Park Drive

## 1630: Palmerston Drive/Matheson Road & Ogilvie Road

Tot 2037 PM

| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector 2 Extend (s)   |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |       |
| Turn Type               | pm+pt | NA    |     | pm+pt | NA    |     | Perm  | NA    |     | Perm  | NA    | Perm  |
| Protected Phases        | 5     | 2     |     | 1     | 6     |     |       | 8     |     |       | 4     |       |
| Permitted Phases        | 2     |       |     | 6     |       |     | 8     |       |     | 4     |       | 4     |
| Detector Phase          | 5     | 2     |     | 1     | 6     |     | 8     | 8     |     | 4     | 4     | 4     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 5.0   | 10.0  |     | 5.0   | 10.0  |     | 10.0  | 10.0  |     | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.7   | 33.6  |     | 9.7   | 33.6  |     | 40.2  | 40.2  |     | 40.2  | 40.2  | 40.2  |
| Total Split (s)         | 15.0  | 65.0  |     | 15.0  | 65.0  |     | 40.0  | 40.0  |     | 40.0  | 40.0  | 40.0  |
| Total Split (%)         | 12.5% | 54.2% |     | 12.5% | 54.2% |     | 33.3% | 33.3% |     | 33.3% | 33.3% | 33.3% |
| Maximum Green (s)       | 10.3  | 59.4  |     | 10.3  | 59.4  |     | 32.8  | 32.8  |     | 32.8  | 32.8  | 32.8  |
| Yellow Time (s)         | 3.7   | 3.7   |     | 3.7   | 3.7   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 1.0   | 1.9   |     | 1.0   | 1.9   |     | 4.2   | 4.2   |     | 4.2   | 4.2   | 4.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 4.7   | 5.6   |     | 4.7   | 5.6   |     | 7.2   | 7.2   |     |       | 7.2   | 7.2   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   |     |       |       |     |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   |     | Yes   | Yes   |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  | C-Max |     | None  | C-Max |     | None  | None  |     | None  | None  | None  |
| Walk Time (s)           |       | 15.0  |     |       | 15.0  |     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 13.0  |     |       | 13.0  |     | 26.0  | 26.0  |     | 26.0  | 26.0  | 26.0  |
| Pedestrian Calls (#/hr) |       | 25    |     |       | 25    |     | 10    | 10    |     | 10    | 10    | 10    |
| Act Effect Green (s)    | 91.5  | 79.5  |     | 84.8  | 76.0  |     | 15.1  | 15.1  |     |       | 15.1  | 15.1  |
| Actuated g/C Ratio      | 0.76  | 0.66  |     | 0.71  | 0.63  |     | 0.13  | 0.13  |     |       | 0.13  | 0.13  |
| v/c Ratio               | 0.60  | 0.81  |     | 0.50  | 0.65  |     | 0.33  | 0.20  |     |       | 0.21  | 0.35  |
| Control Delay           | 17.0  | 20.4  |     | 22.1  | 17.3  |     | 50.3  | 15.6  |     |       | 46.4  | 11.2  |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             | 17.0  | 20.4  |     | 22.1  | 17.3  |     | 50.3  | 15.6  |     |       | 46.4  | 11.2  |
| LOS                     | B     | C     |     | C     | B     |     | D     | B     |     |       | D     | B     |
| Approach Delay          |       | 20.1  |     |       | 17.6  |     |       | 34.6  |     |       | 20.2  |       |
| Approach LOS            |       | C     |     |       | B     |     |       | C     |     |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 19.4

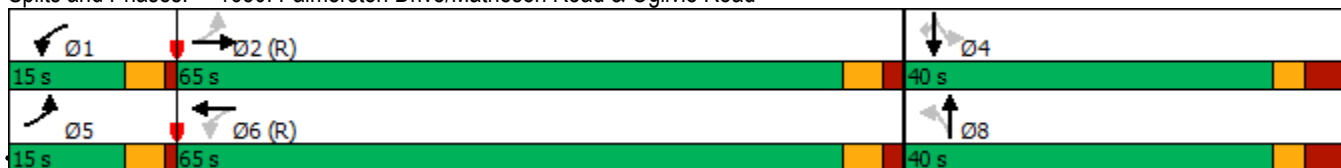
Intersection LOS: B

Intersection Capacity Utilization 88.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1630: Palmerston Drive/Matheson Road & Ogilvie Road



Synchro 11 Report

05/01/2023

## 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie &amp; Ogilvie Road

Tot 2037 AM Fully Protected

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |  |  |  |  |                                                                                     |  |  |  |  |  |
| Traffic Volume (vph)       | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                  | 23                                                                                  | 166                                                                                 | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Future Volume (vph)        | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                  | 23                                                                                  | 166                                                                                 | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Ideal Flow (vphpl)         | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (m)         | 40.0                                                                              |                                                                                   | 100.0                                                                             | 100.0                                                                             |                                                                                   | 50.0                                                                              | 0.0                                                                                 |                                                                                     | 60.0                                                                                | 20.0                                                                                |                                                                                     | 10.0                                                                                |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 30.0                                                                              |                                                                                   |                                                                                   | 25.0                                                                              |                                                                                   |                                                                                   | 7.6                                                                                 |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.96                                                                              |                                                                                   | 0.87                                                                              | 0.96                                                                              |                                                                                   | 0.80                                                                              |                                                                                     | 0.96                                                                                | 0.93                                                                                | 0.95                                                                                |                                                                                     |                                                                                     |
| Frt                        |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.965                                                                               |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1695                                                                              | 3390                                                                              | 1517                                                                              | 1679                                                                              | 3357                                                                              | 1502                                                                              | 0                                                                                   | 1626                                                                                | 1432                                                                                | 1695                                                                                | 1784                                                                                | 1517                                                                                |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.786                                                                               |                                                                                     | 0.704                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1625                                                                              | 3390                                                                              | 1320                                                                              | 1606                                                                              | 3357                                                                              | 1208                                                                              | 0                                                                                   | 1269                                                                                | 1334                                                                                | 1193                                                                                | 1784                                                                                | 1517                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   |                                                                                   | 109                                                                               |                                                                                   |                                                                                   | 146                                                                               |                                                                                     |                                                                                     | 166                                                                                 |                                                                                     |                                                                                     | 105                                                                                 |
| Link Speed (k/h)           |                                                                                   | 60                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 60                                                                                  |                                                                                     |                                                                                     | 60                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 224.7                                                                             |                                                                                   |                                                                                   | 372.0                                                                             |                                                                                   |                                                                                     | 239.4                                                                               |                                                                                     |                                                                                     | 142.3                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.5                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                     | 14.4                                                                                |                                                                                     |                                                                                     | 8.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 100                                                                               |                                                                                   | 65                                                                                | 65                                                                                |                                                                                   | 100                                                                               | 53                                                                                  |                                                                                     | 51                                                                                  | 51                                                                                  |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                | 3%                                                                                | 3%                                                                                | 8%                                                                                  | 8%                                                                                  | 8%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 59                                                                                  | 23                                                                                  | 166                                                                                 | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 102                                                                               | 681                                                                               | 78                                                                                | 87                                                                                | 1023                                                                              | 174                                                                               | 0                                                                                   | 82                                                                                  | 166                                                                                 | 5                                                                                   | 2                                                                                   | 9                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                              | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                | 1.06                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                               | 30.5                                                                              | 6.1                                                                               | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                               | 1.8                                                                               | 6.1                                                                               | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Confl. Bikes (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |

# 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie & Ogilvie Road

Tot 2037 AM Fully Protected

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector 2 Extend (s)   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                                | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 | 8                                                                                   |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                   | 8                                                                                   | 8                                                                                   | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 9.5                                                                               | 35.1                                                                              | 35.1                                                                              | 9.5                                                                               | 35.1                                                                              | 35.1                                                                              | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                |
| Total Split (s)         | 16.0                                                                              | 46.0                                                                              | 46.0                                                                              | 15.5                                                                              | 45.5                                                                              | 45.5                                                                              | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                |
| Total Split (%)         | 16.0%                                                                             | 46.0%                                                                             | 46.0%                                                                             | 15.5%                                                                             | 45.5%                                                                             | 45.5%                                                                             | 33.5%                                                                               | 33.5%                                                                               | 33.5%                                                                               | 33.5%                                                                               | 33.5%                                                                               | 33.5%                                                                               |
| Maximum Green (s)       | 11.5                                                                              | 39.9                                                                              | 39.9                                                                              | 11.0                                                                              | 39.4                                                                              | 39.4                                                                              | 27.0                                                                                | 27.0                                                                                | 27.0                                                                                | 27.0                                                                                | 27.0                                                                                | 27.0                                                                                |
| Yellow Time (s)         | 3.5                                                                               | 3.7                                                                               | 3.7                                                                               | 3.5                                                                               | 3.7                                                                               | 3.7                                                                               | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 |
| All-Red Time (s)        | 1.0                                                                               | 2.4                                                                               | 2.4                                                                               | 1.0                                                                               | 2.4                                                                               | 2.4                                                                               | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 4.5                                                                               | 6.1                                                                               | 6.1                                                                               | 4.5                                                                               | 6.1                                                                               | 6.1                                                                               |                                                                                     | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |
| Flash Dont Walk (s)     |                                                                                   | 22.0                                                                              | 22.0                                                                              |                                                                                   | 22.0                                                                              | 22.0                                                                              | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   | 35                                                                                | 35                                                                                |                                                                                   | 35                                                                                | 35                                                                                | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  |
| Act Effct Green (s)     | 10.1                                                                              | 52.3                                                                              | 52.3                                                                              | 9.5                                                                               | 51.8                                                                              | 51.8                                                                              |                                                                                     | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                | 20.2                                                                                |
| Actuated g/C Ratio      | 0.10                                                                              | 0.52                                                                              | 0.52                                                                              | 0.10                                                                              | 0.52                                                                              | 0.52                                                                              |                                                                                     | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                | 0.20                                                                                |
| v/c Ratio               | 0.60                                                                              | 0.38                                                                              | 0.10                                                                              | 0.55                                                                              | 0.59                                                                              | 0.25                                                                              |                                                                                     | 0.32                                                                                | 0.41                                                                                | 0.02                                                                                | 0.01                                                                                | 0.02                                                                                |
| Control Delay           | 57.5                                                                              | 20.6                                                                              | 8.1                                                                               | 55.9                                                                              | 22.3                                                                              | 6.1                                                                               |                                                                                     | 34.8                                                                                | 8.0                                                                                 | 27.2                                                                                | 27.0                                                                                | 0.1                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 57.5                                                                              | 20.6                                                                              | 8.1                                                                               | 55.9                                                                              | 22.3                                                                              | 6.1                                                                               |                                                                                     | 34.8                                                                                | 8.0                                                                                 | 27.2                                                                                | 27.0                                                                                | 0.1                                                                                 |
| LOS                     | E                                                                                 | C                                                                                 | A                                                                                 | E                                                                                 | C                                                                                 | A                                                                                 |                                                                                     | C                                                                                   | A                                                                                   | C                                                                                   | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 23.9                                                                              |                                                                                   |                                                                                   | 22.4                                                                              |                                                                                   |                                                                                     | 16.8                                                                                |                                                                                     |                                                                                     | 11.9                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                     | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 22.3

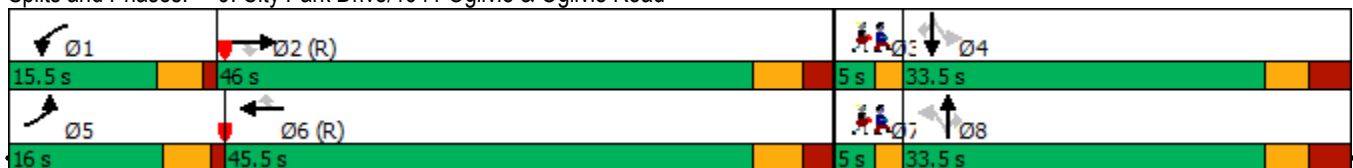
Intersection LOS: C

Intersection Capacity Utilization 74.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



Synchro 11 Report

05/01/2023

| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Detector 2 Extend (s)   |      |      |
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

# 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie & Ogilvie Road

Tot 2037 PM Fully Protected

|                            |  |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                 | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 32                                                                                 | 1484  | 152   | 191   | 603   | 38    | 183   | 10    | 185   | 78    | 19    | 76    |
| Future Volume (vph)        | 32                                                                                 | 1484  | 152   | 191   | 603   | 38    | 183   | 10    | 185   | 78    | 19    | 76    |
| Ideal Flow (vphpl)         | 1800                                                                               | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  |
| Storage Length (m)         | 40.0                                                                               |       | 100.0 | 100.0 |       | 50.0  | 0.0   |       | 60.0  | 20.0  |       | 10.0  |
| Storage Lanes              | 1                                                                                  |       | 1     | 1     |       | 1     | 0     |       | 1     | 1     |       | 1     |
| Taper Length (m)           | 30.0                                                                               |       |       | 25.0  |       |       | 7.6   |       |       | 15.0  |       |       |
| Lane Util. Factor          | 1.00                                                                               | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            | 0.89                                                                               |       | 0.87  | 0.99  |       | 0.73  |       | 0.93  | 0.87  | 0.91  |       | 0.92  |
| Frt                        |                                                                                    |       | 0.850 |       |       | 0.850 |       |       | 0.850 |       |       | 0.850 |
| Flt Protected              | 0.950                                                                              |       |       | 0.950 |       |       |       | 0.955 |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1695                                                                               | 3390  | 1517  | 1679  | 3357  | 1502  | 0     | 1609  | 1432  | 1695  | 1784  | 1517  |
| Flt Permitted              | 0.950                                                                              |       |       | 0.950 |       |       |       | 0.723 |       | 0.557 |       |       |
| Satd. Flow (perm)          | 1512                                                                               | 3390  | 1315  | 1654  | 3357  | 1104  | 0     | 1135  | 1244  | 905   | 1784  | 1388  |
| Right Turn on Red          |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |                                                                                    |       | 152   |       |       | 104   |       |       | 185   |       |       | 143   |
| Link Speed (k/h)           |                                                                                    | 60    |       |       | 60    |       |       | 60    |       |       | 60    |       |
| Link Distance (m)          |                                                                                    | 224.7 |       |       | 372.0 |       |       | 239.4 |       |       | 142.3 |       |
| Travel Time (s)            |                                                                                    | 13.5  |       |       | 22.3  |       |       | 14.4  |       |       | 8.5   |       |
| Confl. Peds. (#/hr)        | 145                                                                                |       | 67    | 67    |       | 145   | 67    |       | 110   | 110   |       | 67    |
| Peak Hour Factor           | 1.00                                                                               | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%    | 2%    | 3%    | 3%    | 3%    | 8%    | 8%    | 8%    | 2%    | 2%    | 2%    |
| Adj. Flow (vph)            | 32                                                                                 | 1484  | 152   | 191   | 603   | 38    | 183   | 10    | 185   | 78    | 19    | 76    |
| Shared Lane Traffic (%)    |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 32                                                                                 | 1484  | 152   | 191   | 603   | 38    | 0     | 193   | 185   | 78    | 19    | 76    |
| Enter Blocked Intersection | No                                                                                 | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left                                                                               | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(m)            |                                                                                    | 3.7   |       |       | 3.7   |       |       | 3.7   |       |       | 3.7   |       |
| Link Offset(m)             |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Crosswalk Width(m)         |                                                                                    | 4.9   |       |       | 4.9   |       |       | 4.9   |       |       | 4.9   |       |
| Two way Left Turn Lane     |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.06                                                                               | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  | 1.06  |
| Turning Speed (k/h)        | 24                                                                                 |       | 14    | 24    |       | 14    | 24    |       | 14    | 24    |       | 14    |
| Number of Detectors        | 1                                                                                  | 2     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 1     | 2     | 1     |
| Detector Template          | Left                                                                               | Thru  | Right | Left  | Thru  | Right | Left  | Thru  | Right | Left  | Thru  | Right |
| Leading Detector (m)       | 6.1                                                                                | 30.5  | 6.1   | 6.1   | 30.5  | 6.1   | 6.1   | 30.5  | 6.1   | 6.1   | 30.5  | 6.1   |
| Trailing Detector (m)      | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 1 Position(m)     | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 1 Size(m)         | 6.1                                                                                | 1.8   | 6.1   | 6.1   | 1.8   | 6.1   | 6.1   | 1.8   | 6.1   | 6.1   | 1.8   | 6.1   |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(m)     |                                                                                    | 28.7  |       |       | 28.7  |       |       | 28.7  |       |       | 28.7  |       |
| Detector 2 Size(m)         |                                                                                    | 1.8   |       |       | 1.8   |       |       | 1.8   |       |       | 1.8   |       |
| Detector 2 Type            |                                                                                    | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |                                                                                    | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |

| Lane Group                 | Ø3 | Ø7 |
|----------------------------|----|----|
| Lane Configurations        |    |    |
| Traffic Volume (vph)       |    |    |
| Future Volume (vph)        |    |    |
| Ideal Flow (vphpl)         |    |    |
| Storage Length (m)         |    |    |
| Storage Lanes              |    |    |
| Taper Length (m)           |    |    |
| Lane Util. Factor          |    |    |
| Ped Bike Factor            |    |    |
| Frt                        |    |    |
| Flt Protected              |    |    |
| Satd. Flow (prot)          |    |    |
| Flt Permitted              |    |    |
| Satd. Flow (perm)          |    |    |
| Right Turn on Red          |    |    |
| Satd. Flow (RTOR)          |    |    |
| Link Speed (k/h)           |    |    |
| Link Distance (m)          |    |    |
| Travel Time (s)            |    |    |
| Confl. Peds. (#/hr)        |    |    |
| Peak Hour Factor           |    |    |
| Heavy Vehicles (%)         |    |    |
| Adj. Flow (vph)            |    |    |
| Shared Lane Traffic (%)    |    |    |
| Lane Group Flow (vph)      |    |    |
| Enter Blocked Intersection |    |    |
| Lane Alignment             |    |    |
| Median Width(m)            |    |    |
| Link Offset(m)             |    |    |
| Crosswalk Width(m)         |    |    |
| Two way Left Turn Lane     |    |    |
| Headway Factor             |    |    |
| Turning Speed (k/h)        |    |    |
| Number of Detectors        |    |    |
| Detector Template          |    |    |
| Leading Detector (m)       |    |    |
| Trailing Detector (m)      |    |    |
| Detector 1 Position(m)     |    |    |
| Detector 1 Size(m)         |    |    |
| Detector 1 Type            |    |    |
| Detector 1 Channel         |    |    |
| Detector 1 Extend (s)      |    |    |
| Detector 1 Queue (s)       |    |    |
| Detector 1 Delay (s)       |    |    |
| Detector 2 Position(m)     |    |    |
| Detector 2 Size(m)         |    |    |
| Detector 2 Type            |    |    |
| Detector 2 Channel         |    |    |
| Detector 2 Extend (s)      |    |    |

# 1900/2000 City Park Drive

## 9: City Park Drive/1941 Ogilvie & Ogilvie Road

Tot 2037 PM Fully Protected

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                | Perm                                                                              | Perm                                                                                | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 |                                                                                   |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     | 4                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 | 8                                                                                   |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |
| Detector Phase          | 5                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 6                                                                                 | 6                                                                                 | 8                                                                                   | 8                                                                                   | 8                                                                                   | 4                                                                                   | 4                                                                                   | 4                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 5.0                                                                               | 10.0                                                                              | 10.0                                                                              | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                | 10.0                                                                                |
| Minimum Split (s)       | 9.5                                                                               | 35.1                                                                              | 35.1                                                                              | 9.0                                                                               | 35.1                                                                              | 35.1                                                                              | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                |
| Total Split (s)         | 10.3                                                                              | 46.5                                                                              | 46.5                                                                              | 15.0                                                                              | 51.2                                                                              | 51.2                                                                              | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                | 33.5                                                                                |
| Total Split (%)         | 10.3%                                                                             | 46.5%                                                                             | 46.5%                                                                             | 15.0%                                                                             | 51.2%                                                                             | 51.2%                                                                             | 33.5%                                                                               | 33.5%                                                                               | 33.5%                                                                               | 33.5%                                                                               | 33.5%                                                                               | 33.5%                                                                               |
| Maximum Green (s)       | 6.3                                                                               | 40.4                                                                              | 40.4                                                                              | 11.0                                                                              | 45.1                                                                              | 45.1                                                                              | 27.0                                                                                | 27.0                                                                                | 27.0                                                                                | 27.0                                                                                | 27.0                                                                                | 27.0                                                                                |
| Yellow Time (s)         | 3.0                                                                               | 3.7                                                                               | 3.7                                                                               | 3.0                                                                               | 3.7                                                                               | 3.7                                                                               | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 | 3.3                                                                                 |
| All-Red Time (s)        | 1.0                                                                               | 2.4                                                                               | 2.4                                                                               | 1.0                                                                               | 2.4                                                                               | 2.4                                                                               | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 4.0                                                                               | 6.1                                                                               | 6.1                                                                               | 4.0                                                                               | 6.1                                                                               | 6.1                                                                               |                                                                                     | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 | 6.5                                                                                 |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                              | C-Max                                                                             | C-Max                                                                             | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |
| Flash Dont Walk (s)     |                                                                                   | 22.0                                                                              | 22.0                                                                              |                                                                                   | 22.0                                                                              | 22.0                                                                              | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                | 25.0                                                                                |
| Pedestrian Calls (#/hr) |                                                                                   | 35                                                                                | 35                                                                                |                                                                                   | 35                                                                                | 35                                                                                | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  | 35                                                                                  |
| Act Effect Green (s)    | 6.1                                                                               | 43.9                                                                              | 43.9                                                                              | 14.1                                                                              | 55.8                                                                              | 55.8                                                                              |                                                                                     | 22.5                                                                                | 22.5                                                                                | 22.5                                                                                | 22.5                                                                                | 22.5                                                                                |
| Actuated g/C Ratio      | 0.06                                                                              | 0.44                                                                              | 0.44                                                                              | 0.14                                                                              | 0.56                                                                              | 0.56                                                                              |                                                                                     | 0.22                                                                                | 0.22                                                                                | 0.22                                                                                | 0.22                                                                                | 0.22                                                                                |
| v/c Ratio               | 0.31                                                                              | 1.00                                                                              | 0.23                                                                              | 0.81                                                                              | 0.32                                                                              | 0.06                                                                              |                                                                                     | 0.76                                                                                | 0.44                                                                                | 0.38                                                                                | 0.05                                                                                | 0.18                                                                                |
| Control Delay           | 47.8                                                                              | 50.1                                                                              | 9.3                                                                               | 70.3                                                                              | 15.1                                                                              | 0.2                                                                               |                                                                                     | 54.4                                                                                | 7.9                                                                                 | 36.8                                                                                | 27.7                                                                                | 0.9                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                     | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 47.8                                                                              | 50.1                                                                              | 9.3                                                                               | 70.3                                                                              | 15.1                                                                              | 0.2                                                                               |                                                                                     | 54.4                                                                                | 7.9                                                                                 | 36.8                                                                                | 27.7                                                                                | 0.9                                                                                 |
| LOS                     | D                                                                                 | D                                                                                 | A                                                                                 | E                                                                                 | B                                                                                 | A                                                                                 |                                                                                     | D                                                                                   | A                                                                                   | D                                                                                   | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 46.3                                                                              |                                                                                   |                                                                                   | 27.1                                                                              |                                                                                   |                                                                                     | 31.7                                                                                |                                                                                     |                                                                                     | 20.1                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                     | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |

### Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 37.8

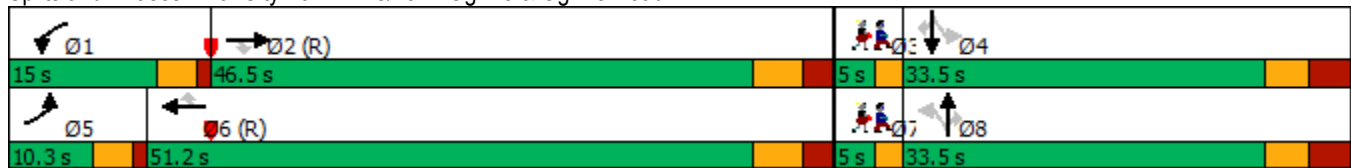
Intersection LOS: D

Intersection Capacity Utilization 102.6%

ICU Level of Service G

Analysis Period (min) 15

### Splits and Phases: 9: City Park Drive/1941 Ogilvie & Ogilvie Road



| Lane Group              | Ø3   | Ø7   |
|-------------------------|------|------|
| Turn Type               |      |      |
| Protected Phases        | 3    | 7    |
| Permitted Phases        |      |      |
| Detector Phase          |      |      |
| Switch Phase            |      |      |
| Minimum Initial (s)     | 1.0  | 1.0  |
| Minimum Split (s)       | 5.0  | 5.0  |
| Total Split (s)         | 5.0  | 5.0  |
| Total Split (%)         | 5%   | 5%   |
| Maximum Green (s)       | 3.0  | 3.0  |
| Yellow Time (s)         | 2.0  | 2.0  |
| All-Red Time (s)        | 0.0  | 0.0  |
| Lost Time Adjust (s)    |      |      |
| Total Lost Time (s)     |      |      |
| Lead/Lag                | Lead | Lead |
| Lead-Lag Optimize?      | Yes  | Yes  |
| Vehicle Extension (s)   | 3.0  | 3.0  |
| Recall Mode             | None | None |
| Walk Time (s)           | 0.0  | 0.0  |
| Flash Dont Walk (s)     | 0.0  | 0.0  |
| Pedestrian Calls (#/hr) | 35   | 35   |
| Act Effct Green (s)     |      |      |
| Actuated g/C Ratio      |      |      |
| v/c Ratio               |      |      |
| Control Delay           |      |      |
| Queue Delay             |      |      |
| Total Delay             |      |      |
| LOS                     |      |      |
| Approach Delay          |      |      |
| Approach LOS            |      |      |
| Intersection Summary    |      |      |

## **APPENDIX L**

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MMLOS Review

### Intersection MMLOS Analysis

The following is a review of the MMLOS of the signalized intersections within the study area, using complete streets principles. Ogilvie Road/Blair Road, Ogilvie Road/1900 Ogilvie Road, Ogilvie Road/City Park Drive, Ogilvie Road/Blair Road, HWY 174 Westbound off-ramp/Blair Road, and HWY 174 Eastbound off-ramp/Blair Road have been evaluated using the MMLOS targets for intersections within 600m of a rapid transit station. Ogilvie Road/Matheson Road/Palmerston Drive and Ogilvie Road/City Park Drive/Bathgate Drive have been evaluated using the worst case MMLOS targets for intersections within a Mixed-Use Centre or Employment Area.

Exhibit 5 of the Addendum to the MMLOS Guidelines has been used to evaluate the existing PLOS at the intersections listed above. Exhibit 22 of the MMLOS Guidelines suggests a target PLOS A for all roadways within 600m of a rapid transit station and a target PLOS C within a Mixed-Use Centre or Employment Area. The results of the intersection PLOS analysis are summarized in **Table 5**.

Exhibit 12 of the MMLOS Guidelines has been used to evaluate the existing BLOS at the intersection listed above. As per Exhibit 22 of the MMLOS Guidelines suggest a target BLOS C for arterial spine routes within 600m of rapid transit, in a Mixed-Use Centre, or in the Employment Area. It also suggests a target BLOS B for local routes along collector roads. The results of the intersection BLOS analysis are summarized in **Table 6**.

Exhibit 16 of the MMLOS Guidelines has been used to evaluate the existing TLOS at the intersection listed above. Exhibit 22 of the MMLOS Guidelines identifies a target TLOS D for all roads with isolated transit priority measures within 600m of rapid transit, in a Mixed Use Centre, or in the Employment Area. The TLOS has been evaluated for every approach that is currently used by transit. The results of the intersection TLOS analysis are summarized in **Table 7**.

Exhibit 21 of the MMLOS Guidelines has been used to evaluate the existing TkLOS at the intersection listed above. Exhibit 22 of the MMLOS Guidelines identifies a target TkLOS B for truck arterial truck routes in the Employment Area and a TkLOS D for arterial truck routes in within 600m of rapid transit or in a Mixed Use Centre. The results of the intersection TkLOS analysis are summarized in **Table 8**.

Table 1: PLOS Intersection Analysis – Ogilvie Road/Matheson Road/Palmerston Road

| Criteria                                    | North Approach                 |      | South Approach        |      | East Approach         |      | West Approach                |      |
|---------------------------------------------|--------------------------------|------|-----------------------|------|-----------------------|------|------------------------------|------|
| Campeau Road/Matheson Road/Palmerston Drive |                                |      |                       |      |                       |      |                              |      |
| PETS I SCORE                                |                                |      |                       |      |                       |      |                              |      |
| CROSSING DISTANCE CONDITIONS                |                                |      |                       |      |                       |      |                              |      |
| Median > 2.4m in Width                      | No                             | 72   | No                    | 72   | No                    | 6    | No                           | 23   |
| Lanes Crossed (3.5m Lane Width)             | 5                              |      | 5                     |      | 9                     |      | 8                            |      |
| SIGNAL PHASING AND TIMING                   |                                |      |                       |      |                       |      |                              |      |
| Left Turn Conflict                          | Perm + Prot                    | -8   | Perm + Prot           | -8   | Permissive            | -8   | Permissive                   | -8   |
| Right Turn Conflict                         | Permissive or Yield            | -5   | Permissive or Yield   | -5   | Permissive or Yield   | -5   | Permissive or Yield          | -5   |
| Right Turn on Red                           | N/A                            | 0    | RTOR Allowed          | -3   | RTOR Allowed          | -3   | RTOR Allowed                 | -3   |
| Leading Pedestrian Interval                 | No                             | -2   | No                    | -2   | No                    | -2   | No                           | -2   |
| CORNER RADIUS                               |                                |      |                       |      |                       |      |                              |      |
| Parallel Radius                             | > 15m to 25m                   | -8   | > 10m to 15m          | -6   | > 10m to 15m          | -6   | > 15m to 25m                 | -8   |
| Parallel Right Turn Channel                 | No Right Turn Channel          | -4   | No Right Turn Channel | -4   | No Right Turn Channel | -4   | onventional without Receivir | 0    |
| Perpendicular Radius                        | > 15m to 25m                   | -8   | N/A                   | 0    | N/A                   | 0    | N/A                          | 0    |
| Perpendicular Right Turn Channel            | Conventional without Receiving | 0    | N/A                   | 0    | N/A                   | 0    | N/A                          | 0    |
| CROSSING TREATMENT                          |                                |      |                       |      |                       |      |                              |      |
| Treatment                                   | Standard                       | -7   | Standard              | -7   | Standard              | -7   | Standard                     | -7   |
| PETS I SCORE                                |                                | 30   |                       | 37   |                       | -29  |                              | -10  |
| LOS                                         |                                | E    |                       | E    |                       | F    |                              | F    |
| DELAY SCORE                                 |                                |      |                       |      |                       |      |                              |      |
| Cycle Length                                |                                | 120  |                       | 120  |                       | 120  |                              | 120  |
| Pedestrian Walk Time                        |                                | 28.4 |                       | 28.4 |                       | 6.8  |                              | 6.8  |
| DELAY SCORE                                 |                                | 35   |                       | 35   |                       | 53.4 |                              | 53.4 |
| LOS                                         |                                | D    |                       | D    |                       | E    |                              | E    |
| OVERALL                                     |                                | E    |                       | E    |                       | F    |                              | F    |

Table 2: PLOS Intersection Analysis – Ogilvie Road/Cadboro Road

| Criteria                         | North Approach          |     | East Approach           |      | West Approach            |      |
|----------------------------------|-------------------------|-----|-------------------------|------|--------------------------|------|
| Ogilvie Road/Cadboro Road        |                         |     |                         |      |                          |      |
| PETS I SCORE                     |                         |     |                         |      |                          |      |
| CROSSING DISTANCE CONDITIONS     |                         |     |                         |      |                          |      |
| Median > 2.4m in Width           | No                      | 72  | Yes                     | 30   | Yes                      | 30   |
| Lanes Crossed (3.5m Lane Width)  | 5                       |     | 8                       |      | 8                        |      |
| SIGNAL PHASING AND TIMING        |                         |     |                         |      |                          |      |
| Left Turn Conflict               | No Left Turn/Prohibited | 0   | No Left Turn/Prohibited | 0    | No Left Turn/Prohibited  | 0    |
| Right Turn Conflict              | Permissive or Yield     | -5  | Permissive or Yield     | -5   | No Right Turn/Prohibited | 0    |
| Right Turn on Red                | RTOR Allowed            | -3  | RTOR Allowed            | -3   | RTOR Allowed             | -3   |
| Leading Pedestrian Interval      | No                      | -2  | No                      | -2   | No                       | -2   |
| CORNER RADIUS                    |                         |     |                         |      |                          |      |
| Parallel Radius                  | > 15m to 25m            | -8  | > 10m to 15m            | -6   | > 3m to 5m               | -4   |
| Parallel Right Turn Channel      | No Right Turn Channel   | -4  | No Right Turn Channel   | -4   | No Right Turn Channel    | -4   |
| Perpendicular Radius             | N/A                     | 0   | N/A                     | 0    | N/A                      | 0    |
| Perpendicular Right Turn Channel | N/A                     | 0   | N/A                     | 0    | N/A                      | 0    |
| CROSSING TREATMENT               |                         |     |                         |      |                          |      |
| Treatment                        | Standard                | -7  | Standard                | -7   | Standard                 | -7   |
| PETS I SCORE                     |                         | 43  |                         | 3    |                          | 10   |
| LOS                              |                         | E   |                         | F    |                          | F    |
| DELAY SCORE                      |                         |     |                         |      |                          |      |
| Cycle Length                     |                         | 100 |                         | 100  |                          | 100  |
| Pedestrian Walk Time             |                         | 40  |                         | 24   |                          | 24   |
| DELAY SCORE                      |                         | 18  |                         | 28.9 |                          | 28.9 |
| LOS                              |                         | B   |                         | C    |                          | C    |
| OVERALL                          |                         | E   |                         | F    |                          | F    |

Table 3: PLOS Intersection Analysis – Ogilvie Road/City Park Drive/Bathgate Drive

| Criteria                                    | North Approach        |      | South Approach        |      | East Approach         |      | West Approach         |      |
|---------------------------------------------|-----------------------|------|-----------------------|------|-----------------------|------|-----------------------|------|
| Ogilvie Road/City Park Drive/Bathgate Drive |                       |      |                       |      |                       |      |                       |      |
| PETSİ SCORE                                 |                       |      |                       |      |                       |      |                       |      |
| CROSSING DISTANCE CONDITIONS                |                       |      |                       |      |                       |      |                       |      |
| Median > 2.4m in Width                      | No                    | 55   | No                    | 55   | No                    | 23   | No                    | 6    |
| Lanes Crossed (3.5m Lane Width)             | 6                     |      | 6                     |      | 8                     |      | 9                     |      |
| SIGNAL PHASING AND TIMING                   |                       |      |                       |      |                       |      |                       |      |
| Left Turn Conflict                          | Perm + Prot           | -8   | Perm + Prot           | -8   | Permissive            | -8   | Permissive            | -8   |
| Right Turn Conflict                         | Permissive or Yield   | -5   | Permissive or Yield   | -5   | Permissive or Yield   | -5   | Permissive or Yield   | -5   |
| Right Turn on Red                           | RTOR Allowed          | -3   | RTOR Allowed          | -3   | RTOR Allowed          | -3   | RTOR Allowed          | -3   |
| Leading Pedestrian Interval                 | No                    | -2   | No                    | -2   | Yes                   | 0    | Yes                   | 0    |
| CORNER RADIUS                               |                       |      |                       |      |                       |      |                       |      |
| Parallel Radius                             | > 15m to 25m          | -8   | > 10m to 15m          | -6   | > 10m to 15m          | -6   | > 10m to 15m          | -6   |
| Parallel Right Turn Channel                 | No Right Turn Channel | -4   | No Right Turn Channel | -4   | No Right Turn Channel | -4   | No Right Turn Channel | -4   |
| Perpendicular Radius                        | N/A                   | 0    | N/A                   | 0    | N/A                   | 0    | N/A                   | 0    |
| Perpendicular Right Turn Channel            | N/A                   | 0    | N/A                   | 0    | N/A                   | 0    | N/A                   | 0    |
| CROSSING TREATMENT                          |                       |      |                       |      |                       |      |                       |      |
| Treatment                                   | Standard              | -7   | Standard              | -7   | Standard              | -7   | Standard              | -7   |
| PETSİ SCORE                                 |                       | 18   |                       | 20   |                       | -10  |                       | -27  |
| LOS                                         |                       | F    |                       | F    |                       | F    |                       | F    |
| DELAY SCORE                                 |                       |      |                       |      |                       |      |                       |      |
| Cycle Length                                |                       | 100  |                       | 100  |                       | 100  |                       | 100  |
| Pedestrian Walk Time                        |                       | 16   |                       | 16   |                       | 7.6  |                       | 7.6  |
| DELAY SCORE                                 |                       | 35.3 |                       | 35.3 |                       | 42.7 |                       | 42.7 |
| LOS                                         |                       | D    |                       | D    |                       | E    |                       | E    |
| OVERALL                                     |                       | F    |                       | F    |                       | F    |                       | F    |

Table 4: PLOS Intersection Analysis – Ogilvie Road/1900 Ogilvie Road

| Criteria                         | North Approach        |      | South Approach        |      | East Approach         |     | West Approach         |     |
|----------------------------------|-----------------------|------|-----------------------|------|-----------------------|-----|-----------------------|-----|
| Ogilvie Road/1900 Ogilvie Road   |                       |      |                       |      |                       |     |                       |     |
| PETS I SCORE                     |                       |      |                       |      |                       |     |                       |     |
| CROSSING DISTANCE CONDITIONS     |                       |      |                       |      |                       |     |                       |     |
| Median > 2.4m in Width           | No                    | 88   | No                    | 72   | No                    | 39  | No                    | 23  |
| Lanes Crossed (3.5m Lane Width)  | 4                     |      | 5                     |      | 7                     |     | 8                     |     |
| SIGNAL PHASING AND TIMING        |                       |      |                       |      |                       |     |                       |     |
| Left Turn Conflict               | Permissive            | -8   | Permissive            | -8   | Permissive            | -8  | Permissive            | -8  |
| Right Turn Conflict              | Permissive or Yield   | -5   | Permissive or Yield   | -5   | Permissive or Yield   | -5  | Permissive or Yield   | -5  |
| Right Turn on Red                | RTOR Allowed          | -3   | RTOR Allowed          | -3   | RTOR Allowed          | -3  | RTOR Allowed          | -3  |
| Leading Pedestrian Interval      | No                    | -2   | No                    | -2   | No                    | -2  | No                    | -2  |
| CORNER RADIUS                    |                       |      |                       |      |                       |     |                       |     |
| Parallel Radius                  | > 10m to 15m          | -6   | > 10m to 15m          | -6   | > 10m to 15m          | -6  | > 10m to 15m          | -6  |
| Parallel Right Turn Channel      | No Right Turn Channel | -4   | No Right Turn Channel | -4   | No Right Turn Channel | -4  | No Right Turn Channel | -4  |
| Perpendicular Radius             | N/A                   | 0    | N/A                   | 0    | N/A                   | 0   | N/A                   | 0   |
| Perpendicular Right Turn Channel | N/A                   | 0    | N/A                   | 0    | N/A                   | 0   | N/A                   | 0   |
| CROSSING TREATMENT               |                       |      |                       |      |                       |     |                       |     |
| Treatment                        | Standard              | -7   | Standard              | -7   | Standard              | -7  | Standard              | -7  |
| PETS I SCORE                     |                       | 53   |                       | 37   |                       | 4   |                       | -12 |
| LOS                              |                       | D    |                       | E    |                       | F   |                       | F   |
| DELAY SCORE                      |                       |      |                       |      |                       |     |                       |     |
| Cycle Length                     |                       | 100  |                       | 100  |                       | 100 |                       | 100 |
| Pedestrian Walk Time             |                       | 44.1 |                       | 44.1 |                       | 7.3 |                       | 7.3 |
| DELAY SCORE                      |                       | 15.6 |                       | 15.6 |                       | 43  |                       | 43  |
| LOS                              |                       | B    |                       | B    |                       | E   |                       | E   |
| OVERALL                          |                       | D    |                       | E    |                       | F   |                       | F   |

Table 5: PLOS Intersection Analysis – Ogilvie Road/City Park Drive East

| Criteria                          | North Approach                 |      | South Approach        |      | East Approach                |      | West Approach               |      |
|-----------------------------------|--------------------------------|------|-----------------------|------|------------------------------|------|-----------------------------|------|
| Ogilvie Road/City Park Drive East |                                |      |                       |      |                              |      |                             |      |
| PETSİ SCORE                       |                                |      |                       |      |                              |      |                             |      |
| CROSSİNG DISTANCE CONDITIONS      |                                |      |                       |      |                              |      |                             |      |
| Median > 2.4m in Width            | No                             | 105  | No                    | 23   | No                           | 23   | No                          | 6    |
| Lanes Crossed (3.5m Lane Width)   | 3                              |      | 8                     |      | 8                            |      | 9                           |      |
| SİGNAL PHASİNG AND TİMİNG         |                                |      |                       |      |                              |      |                             |      |
| Left Turn Conflict                | Permissive                     | -8   | Permissive            | -8   | Permissive                   | -8   | Permissive                  | -8   |
| Right Turn Conflict               | Permissive or Yield            | -5   | Permissive or Yield   | -5   | Permissive or Yield          | -5   | Permissive or Yield         | -5   |
| Right Turn on Red                 | N/A                            | 0    | RTOR Allowed          | -3   | N/A                          | 0    | RTOR Allowed                | -3   |
| Leading Pedestrian Interval       | No                             | -2   | No                    | -2   | Yes                          | 0    | Yes                         | 0    |
| CORNİER RADİUS                    |                                |      |                       |      |                              |      |                             |      |
| Parallel Radius                   | > 15m to 25m                   | -8   | > 10m to 15m          | -6   | > 15m to 25m                 | -8   | > 15m to 25m                | -8   |
| Parallel Right Turn Channel       | Conventional without Receiving | 0    | No Right Turn Channel | -4   | No Right Turn Channel        | -4   | Conventional with Receiving | -3   |
| Perpendicular Radius              | > 15m to 25m                   | -8   | N/A                   | 0    | > 15m to 25m                 | -8   | N/A                         | 0    |
| Perpendicular Right Turn Channel  | Conventional without Receiving | 0    | N/A                   | 0    | onventional without Receivir | 0    | N/A                         | 0    |
| CROSSİNG TREATMENT                |                                |      |                       |      |                              |      |                             |      |
| Treatment                         | Zebra Stripe                   | -4   | Zebra Stripe          | -4   | Zebra Stripe                 | -4   | Zebra Stripe                | -4   |
| PETSİ SCORE                       |                                | 70   |                       | -9   |                              | -14  |                             | -25  |
| LOS                               |                                | C    |                       | F    |                              | F    |                             | F    |
| DELAY SCORE                       |                                |      |                       |      |                              |      |                             |      |
| Cycle Length                      |                                | 100  |                       | 100  |                              | 100  |                             | 100  |
| Pedestrian Walk Time              |                                | 17.9 |                       | 32.9 |                              | 2.5  |                             | 2.5  |
| DELAY SCORE                       |                                | 33.7 |                       | 22.5 |                              | 47.5 |                             | 47.5 |
| LOS                               |                                | D    |                       | C    |                              | E    |                             | E    |
| OVERALL                           |                                | D    | F                     |      | F                            |      | F                           |      |

Table 6: PLOS Intersection Analysis – Ogilvie Road/Blair Road

| Criteria                         | North Approach        |      | South Approach               |      | East Approach                |      | West Approach               |      |
|----------------------------------|-----------------------|------|------------------------------|------|------------------------------|------|-----------------------------|------|
| Ogilvie Road/Blair Road          |                       |      |                              |      |                              |      |                             |      |
| PETSİ SCORE                      |                       |      |                              |      |                              |      |                             |      |
| CROSSİNG DISTANCE CONDITIONS     |                       |      |                              |      |                              |      |                             |      |
| Median > 2.4m in Width           | No                    | 6    | No                           | 39   | No                           | 23   | No                          | 39   |
| Lanes Crossed (3.5m Lane Width)  | 9                     |      | 7                            |      | 8                            |      | 7                           |      |
| SİGNAL PHASİNG AND TİMİNG        |                       |      |                              |      |                              |      |                             |      |
| Left Turn Conflict               | Protected             | 0    | Protected                    | 0    | Protected                    | 0    | Protected                   | 0    |
| Right Turn Conflict              | Permissive or Yield   | -5   | Permissive or Yield          | -5   | Permissive or Yield          | -5   | Permissive or Yield         | -5   |
| Right Turn on Red                | RTOR Allowed          | -3   | N/A                          | 0    | RTOR Allowed                 | -3   | N/A                         | 0    |
| Leading Pedestrian Interval      | No                    | -2   | No                           | -2   | No                           | -2   | No                          | -2   |
| CORNİER RADIUS                   |                       |      |                              |      |                              |      |                             |      |
| Parallel Radius                  | > 10m to 15m          | -6   | > 25m                        | -9   | > 25m                        | -9   | > 10m to 15m                | -6   |
| Parallel Right Turn Channel      | No Right Turn Channel | -4   | Conventional with Receiving  | -3   | onventional without Receivir | 0    | No Right Turn Channel       | -4   |
| Perpendicular Radius             | N/A                   | 0    | > 25m                        | -9   | N/A                          | 0    | > 25m                       | -9   |
| Perpendicular Right Turn Channel | N/A                   | 0    | onventional without Receivir | 0    | N/A                          | 0    | Conventional with Receiving | -3   |
| CROSSİNG TREATMENT               |                       |      |                              |      |                              |      |                             |      |
| Treatment                        | Standard              | -7   | Standard                     | -7   | Standard                     | -7   | Standard                    | -7   |
| PETSİ SCORE                      |                       | -21  |                              | 4    |                              | -3   |                             | 0    |
| LOS                              |                       | F    |                              | F    |                              | F    |                             | F    |
| DELAY SCORE                      |                       |      |                              |      |                              |      |                             |      |
| Cycle Length                     |                       | 140  |                              | 140  |                              | 140  |                             | 140  |
| Pedestrian Walk Time             |                       | 7.4  |                              | 7.4  |                              | 12.5 |                             | 8.5  |
| DELAY SCORE                      |                       | 62.8 |                              | 62.8 |                              | 58.1 |                             | 61.8 |
| LOS                              |                       | F    |                              | F    |                              | E    |                             | F    |
| OVERALL                          |                       | F    |                              | F    |                              | F    |                             | F    |

Table 7: PLOS Intersection Analysis – Blair Road/HWY 174 WB off-ramp

| Criteria                         | North Approach                 |      | East Approach               |      | West Approach                  |      |
|----------------------------------|--------------------------------|------|-----------------------------|------|--------------------------------|------|
| Blair Road/HWY 174 WB            |                                |      |                             |      |                                |      |
| PETS I SCORE                     |                                |      |                             |      |                                |      |
| CROSSING DISTANCE CONDITIONS     |                                |      |                             |      |                                |      |
| Median > 2.4m in Width           | Yes                            | 0    | No                          | 105  | No                             | 39   |
| Lanes Crossed (3.5m Lane Width)  | 10 +                           |      | 3                           |      | 7                              |      |
| SIGNAL PHASING AND TIMING        |                                |      |                             |      |                                |      |
| Left Turn Conflict               | Permissive                     | -8   | No Left Turn/Prohibited     | 0    | Protected                      | 0    |
| Right Turn Conflict              | Permissive or Yield            | -5   | No Right Turn/Prohibited    | 0    | Permissive or Yield            | -5   |
| Right Turn on Red                | RTOR Allowed                   | -3   | RTOR Allowed                | -3   | RTOR Allowed                   | -3   |
| Leading Pedestrian Interval      | No                             | -2   | No                          | -2   | No                             | -2   |
| CORNER RADIUS                    |                                |      |                             |      |                                |      |
| Parallel Radius                  | > 25m                          | -9   | No Right Turn               | 0    | > 25m                          | -9   |
| Parallel Right Turn Channel      | Conventional with Receiving    | -3   | No Right Turn               | 0    | Conventional without Receiving | 0    |
| Perpendicular Radius             | > 25m                          | -9   | > 25m                       | -9   | N/A                            | 0    |
| Perpendicular Right Turn Channel | Conventional without Receiving | 0    | Conventional with Receiving | -3   | N/A                            | 0    |
| CROSSING TREATMENT               |                                |      |                             |      |                                |      |
| Treatment                        | Standard                       | -7   | Standard                    | -7   | Standard                       | -7   |
| PETS I SCORE                     |                                | -46  |                             | 81   |                                | 13   |
| LOS                              |                                | F    |                             | B    |                                | F    |
| DELAY SCORE                      |                                |      |                             |      |                                |      |
| Cycle Length                     |                                | 130  |                             | 130  |                                | 130  |
| Pedestrian Walk Time             |                                | 6.2  |                             | 35.9 |                                | 8.9  |
| DELAY SCORE                      |                                | 58.9 |                             | 34.1 |                                | 56.4 |
| LOS                              |                                | E    |                             | D    |                                | E    |
| OVERALL                          |                                | F    |                             | D    |                                | F    |

Table 8: PLOS Intersection Analysis – Blair Road/HWY 174 EB

| Criteria                         | North Approach           |      | South Approach           |      | East Approach         |      |
|----------------------------------|--------------------------|------|--------------------------|------|-----------------------|------|
| Blair Road/HWY 174 EB            |                          |      |                          |      |                       |      |
| PETS I SCORE                     |                          |      |                          |      |                       |      |
| CROSSING DISTANCE CONDITIONS     |                          |      |                          |      |                       |      |
| Median > 2.4m in Width           | No                       | 72   | No                       | 55   | No                    | 23   |
| Lanes Crossed (3.5m Lane Width)  | 5                        |      | 6                        |      | 8                     |      |
| SIGNAL PHASING AND TIMING        |                          |      |                          |      |                       |      |
| Left Turn Conflict               | No Left Turn/Prohibited  | 0    | Permissive               | -8   | Permissive            | -8   |
| Right Turn Conflict              | No Right Turn/Prohibited | 0    | No Right Turn/Prohibited | 0    | Permissive or Yield   | -5   |
| Right Turn on Red                | N/A                      | 0    | RTOR Allowed             | -3   | N/A                   | 0    |
| Leading Pedestrian Interval      | No                       | -2   | No                       | -2   | No                    | -2   |
| CORNER RADIUS                    |                          |      |                          |      |                       |      |
| Parallel Radius                  | No Right Turn            | 0    | No Right Turn            | 0    | > 15m to 25m          | -8   |
| Parallel Right Turn Channel      | No Right Turn            | 0    | No Right Turn            | 0    | No Right Turn Channel | -4   |
| Perpendicular Radius             | N/A                      | 0    | N/A                      | 0    | N/A                   | 0    |
| Perpendicular Right Turn Channel | N/A                      | 0    | N/A                      | 0    | N/A                   | 0    |
| CROSSING TREATMENT               |                          |      |                          |      |                       |      |
| Treatment                        | Standard                 | -7   | Standard                 | -7   | Standard              | -7   |
| PETS I SCORE                     |                          | 63   |                          | 35   |                       | -11  |
| LOS                              |                          | C    |                          | E    |                       | F    |
| DELAY SCORE                      |                          |      |                          |      |                       |      |
| Cycle Length                     |                          | 90   |                          | 90   |                       | 90   |
| Pedestrian Walk Time             |                          | 16.7 |                          | 31.5 |                       | 31.5 |
| DELAY SCORE                      |                          | 29.8 |                          | 19   |                       | 19   |
| LOS                              |                          | C    |                          | B    |                       | B    |
| OVERALL                          |                          | C    |                          | E    |                       | F    |

Table 9: BLOS Intersection Analysis

| Approach                                         | Facility Type | Criteria                        | Travel Lanes and/or Speed       | BLOS |
|--------------------------------------------------|---------------|---------------------------------|---------------------------------|------|
| Ogilvie Road/Matheson Road/Palmerston Drive      |               |                                 |                                 |      |
| North Approach                                   | Mixed Traffic | Right Turn Lane Characteristics | Right-turn lane longer than 50m | F    |
|                                                  |               | Left Turn Accommodation         | No lane crossed ≤ 50km/h        | B    |
| South Approach                                   | Mixed Traffic | Right Turn Lane Characteristics | Shared through/right turn lane  | A    |
|                                                  |               | Left Turn Accommodation         | One lane crossed ≤ 50km/h       | D    |
| East Approach                                    | Bike Lane     | Right Turn Lane Characteristics | No impact on LTS                | A    |
|                                                  |               | Left Turn Accommodation         | Two lanes crossed ≥ 60km/h      | F    |
| West Approach                                    | Bike Lane     | Right Turn Lane Characteristics | No impact on LTS                | A    |
|                                                  |               | Left Turn Accommodation         | Two lanes crossed ≥ 60km/h      | F    |
| Ogilvie Road/Cadboro Road                        |               |                                 |                                 |      |
| North Approach                                   | Mixed Traffic | Right Turn Lane Characteristics | Shared through/right turn lane  | A    |
| East Approach                                    | Bike Lane     | Right Turn Lane Characteristics | No impact on LTS                | A    |
| West Approach                                    | Bike Lane     | Right Turn Lane Characteristics | No impact on LTS                | A    |
| Ogilvie Road/Bathgate Drive/City Park Drive      |               |                                 |                                 |      |
| North Approach                                   | Mixed Traffic | Right Turn Lane Characteristics | Shared through/right turn lane  | A    |
|                                                  |               | Left Turn Accommodation         | One lane crossed ≤ 50km/h       | D    |
| South Approach                                   | Mixed Traffic | Right Turn Lane Characteristics | Shared through/right turn lane  | A    |
|                                                  |               | Left Turn Accommodation         | One lane crossed ≥ 60km/h       | F    |
| East Approach                                    | Bike Lane     | Right Turn Lane Characteristics | No impact on LTS                | A    |
|                                                  |               | Left Turn Accommodation         | Two lanes crossed ≥ 60km/h      | F    |
| West Approach                                    | Bike Lane     | Right Turn Lane Characteristics | No impact on LTS                | A    |
|                                                  |               | Left Turn Accommodation         | Two lanes crossed ≥ 60km/h      | F    |
| Ogilvie Road/1929 Ogilvie Road/1900 Ogilvie Road |               |                                 |                                 |      |
| North Approach                                   | Mixed Traffic | Right Turn Lane Characteristics | Right-turn lane longer than 50m | F    |
|                                                  |               | Left Turn Accommodation         | One lane crossed ≤ 50km/h       | B    |
| South Approach                                   | Mixed Traffic | Right Turn Lane Characteristics | Shared through/right turn lane  | A    |
|                                                  |               | Left Turn Accommodation         | One lane crossed ≤ 50km/h       | B    |
| East Approach                                    | Bike Lane     | Right Turn Lane Characteristics | No impact on LTS                | A    |
|                                                  |               | Left Turn Accommodation         | Two lanes crossed ≥ 60km/h      | D    |

| Approach                                             | Facility Type    | Criteria                        | Travel Lanes and/or Speed                          | BLOS |
|------------------------------------------------------|------------------|---------------------------------|----------------------------------------------------|------|
| West Approach                                        | Pocket Bike Lane | Right Turn Lane Characteristics | Right-turn lane longer than 50m                    | D    |
|                                                      |                  | Left Turn Accommodation         | One lane crossed $\geq$ 60km/h                     | F    |
| Ogilvie Road/City Park Drive/1941 Ogilvie Road       |                  |                                 |                                                    |      |
| North Approach                                       | Mixed Traffic    | Right Turn Lane Characteristics | Right-turn lane 25-50m long turning speed > 25km/h | E    |
|                                                      |                  | Left Turn Accommodation         | No lane crossed $\leq$ 50km/h                      | B    |
| South Approach                                       | Mixed Traffic    | Right Turn Lane Characteristics | No impact on LTS                                   | A    |
|                                                      |                  | Left Turn Accommodation         | One lane crossed $\geq$ 60km/h                     | F    |
| East Approach                                        | Pocket Bike Lane | Right Turn Lane Characteristics | Right-turn lane longer than 50m                    | D    |
|                                                      |                  | Left Turn Accommodation         | Two lanes crossed $\geq$ 60km/h                    | F    |
| West Approach                                        | Pocket Bike Lane | Right Turn Lane Characteristics | Right-turn lane longer than 50m                    | D    |
|                                                      |                  | Left Turn Accommodation         | One lane crossed $\geq$ 60km/h                     | F    |
| Ogilvie Road/Blair Road                              |                  |                                 |                                                    |      |
| North Approach                                       | Bike Lane        | Right Turn Lane Characteristics | No impact on LTS                                   | A    |
|                                                      |                  | Left Turn Accommodation         | One lane crossed $\geq$ 60km/h                     | F    |
| South Approach                                       | Mixed Traffic    | Right Turn Lane Characteristics | Right-turn lane longer than 50m                    | F    |
|                                                      |                  | Left Turn Accommodation         | One lane crossed $\geq$ 60km/h                     | F    |
| East Approach                                        | Mixed Traffic    | Right Turn Lane Characteristics | No impact on LTS                                   | A    |
|                                                      |                  | Left Turn Accommodation         | Dual left turn lanes                               | F    |
| West Approach                                        | Pocket Bike Lane | Right Turn Lane Characteristics | Right-turn lane longer than 50m                    | F    |
|                                                      |                  | Left Turn Accommodation         | Two lanes crossed $\geq$ 60km/h                    | F    |
| Blair Road/Highway 174 WB off-ramp/1980 Ogilvie Road |                  |                                 |                                                    |      |
| North Approach                                       | Mixed Traffic    | Right Turn Lane Characteristics | Right-turn lane longer than 50m                    | F    |
| South Approach                                       | Mixed Traffic    | Left Turn Accommodation         | Dual left turn lanes                               | F    |
| West Approach                                        | Mixed Traffic    | Right Turn Lane Characteristics | Right-turn lane longer than 50m                    | F    |
|                                                      |                  | Left Turn Accommodation         | One lane crossed $\geq$ 60km/h                     | F    |
| Blair Road/Highway 174 EB                            |                  |                                 |                                                    |      |
| North Approach                                       | Mixed Traffic    | Left Turn Accommodation         | No left turn                                       | A    |
| South Approach                                       | Mixed Traffic    | Right Turn Lane Characteristics | No right turn                                      | A    |

Table 10: TLOS Intersection Analysis

| Approach                                             | Delay <sup>(1)</sup> |         | TLOS |
|------------------------------------------------------|----------------------|---------|------|
|                                                      | AM Peak              | PM Peak |      |
| Ogilvie Road/Matheson Road/Palmerston Drive          |                      |         |      |
| East Approach                                        | 9 sec                | 14 sec  | C    |
| West Approach                                        | 12 sec               | 15 sec  | C    |
| Ogilvie Road/Cadboro Road                            |                      |         |      |
| East Approach                                        | 1 sec                | 2 sec   | B    |
| West Approach                                        | 4 sec                | 5 sec   | B    |
| Ogilvie Road/Bathgate Drive/City Park Drive          |                      |         |      |
| North Approach                                       | 35 sec               | 30 sec  | E    |
| South Approach                                       | 39 sec               | 56 sec  | F    |
| East Approach                                        | 13 sec               | 13 sec  | C    |
| West Approach                                        | 11 sec               | 15 sec  | C    |
| Ogilvie Road/1929 Ogilvie Road/1900 Ogilvie Road     |                      |         |      |
| East Approach                                        | 3 sec                | 4 sec   | B    |
| West Approach                                        | 2 sec                | 6 sec   | B    |
| Ogilvie Road/City Park Drive/1941 Ogilvie Road       |                      |         |      |
| South Approach                                       | 52 sec               | 37 sec  | F    |
| East Approach                                        | 6 sec                | 12 sec  | C    |
| West Approach                                        | 2 sec                | 21 sec  | D    |
| Ogilvie Road/Blair Road                              |                      |         |      |
| North Approach                                       | 54 sec               | 72 sec  | F    |
| South Approach                                       | 58 sec               | 34 sec  | F    |
| East Approach                                        | 62 sec               | 51 sec  | F    |
| West Approach                                        | 40 sec               | 72 sec  | F    |
| Blair Road/Highway 174 WB off-ramp/1980 Ogilvie Road |                      |         |      |
| North Approach                                       | 25 sec               | 28 sec  | D    |
| South Approach                                       | 24 sec               | 16 sec  | C    |
| West Approach                                        | 16 sec               | 48 sec  | F    |
| Blair Road/Highway 174 EB                            |                      |         |      |
| North Approach                                       | 14 sec               | 18 sec  | C    |
| South Approach                                       | 10 sec               | 28 sec  | D    |

1. Delay based on outputs from Synchro analysis of existing conditions

Table 11: TkLOS Intersection Analysis

| Approach                                           | Effective Corner Radius | Number of Receiving Lanes<br>Departing Intersection | TkLOS |
|----------------------------------------------------|-------------------------|-----------------------------------------------------|-------|
| <b>Ogilvie Road/Matheson Road/Palmerston Drive</b> |                         |                                                     |       |
| North Approach                                     | > 15m                   | 2                                                   | A     |
| South Approach                                     | < 10m                   | 2                                                   | D     |
| East Approach                                      | 10m to 15m              | 2                                                   | B     |
| West Approach                                      | 10m to 15m              | 1                                                   | E     |
| <b>Ogilvie Road/Cadboro Road</b>                   |                         |                                                     |       |
| North Approach                                     | 10m to 15m              | 2                                                   | B     |
| East Approach                                      | 10m to 15m              | 1                                                   | E     |
| West Approach                                      | N/A                     | N/A                                                 | N/A   |
| <b>Ogilvie Road/Bathgate Drive/City Park Drive</b> |                         |                                                     |       |
| North Approach                                     | 10m to 15m              | 2                                                   | B     |

| Approach                                                    | Effective Corner Radius | Number of Receiving Lanes<br>Departing Intersection | TkLOS |
|-------------------------------------------------------------|-------------------------|-----------------------------------------------------|-------|
| South Approach                                              | 10m to 15m              | 2                                                   | B     |
| East Approach                                               | 10m to 15m              | 1                                                   | E     |
| West Approach                                               | 10m to 15m              | 1                                                   | E     |
| <b>Ogilvie Road/1929 Ogilvie Road/1900 Ogilvie Road</b>     |                         |                                                     |       |
| North Approach                                              | 10m to 15m              | 2                                                   | B     |
| South Approach                                              | 10m to 15m              | 2                                                   | B     |
| East Approach                                               | 10m to 15m              | 1                                                   | E     |
| West Approach                                               | 10m to 15m              | 1                                                   | E     |
| <b>Ogilvie Road/City Park Drive/1941 Ogilvie Road</b>       |                         |                                                     |       |
| North Approach                                              | > 15m                   | 2                                                   | A     |
| South Approach                                              | 10m to 15m              | 2                                                   | B     |
| East Approach                                               | > 15m                   | 1                                                   | C     |
| West Approach                                               | 10m to 15m              | 1                                                   | E     |
| <b>Ogilvie Road/Blair Road</b>                              |                         |                                                     |       |
| North Approach                                              | 10m to 15m              | 2                                                   | B     |
| South Approach                                              | > 15m                   | 2                                                   | A     |
| East Approach                                               | 10m to 15m              | 1                                                   | E     |
| West Approach                                               | > 15m                   | 3                                                   | A     |
| <b>Blair Road/Highway 174 WB off-ramp/1980 Ogilvie Road</b> |                         |                                                     |       |
| North Approach                                              | > 15m                   | 2                                                   | A     |
| South Approach                                              | N/A                     | N/A                                                 | N/A   |
| East Approach                                               | > 15m                   | 2                                                   | A     |
| West Approach                                               | 10m to 15m              | 2                                                   | B     |
| <b>Blair Road/Highway 174 EB</b>                            |                         |                                                     |       |
| North Approach                                              | N/A                     | 2                                                   | N/A   |
| South Approach                                              | > 15m                   | 1                                                   | C     |
| East Approach                                               | > 15m                   | 2                                                   | A     |