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Proposed Commercial Development 3493-3499 Innes Road, Ottawa

Transportation Impact Assessment

Proposed Commercial Development 3493-3499 Innes Road

Transportation Impact Assessment

Prepared By:

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

> Dated: December 2022 Revised: November 2023 Revised: January 2024

Novatech File: 118204 Ref: R-2021-105



January 17, 2024

City of Ottawa Planning, Real Estate, and Economic Development Department 110 Laurier Ave. W., 4th Floor Ottawa, Ontario K1P 1J1

Attention: Mr. Mike Giampa Senior Engineer, Infrastructure Applications

Dear Mr. Giampa:

Reference: 3493-3499 Innes Road Revised Transportation Impact Assessment Novatech File No. 118204

We are pleased to submit the following revised Transportation Impact Assessment (TIA), in support of Zoning By-Law Amendment and Site Plan Control applications at 3493-3499 Innes Road, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa's *2023 Revised Transportation Impact Assessment (TIA) Guidelines*.

The original TIA in support of this development was submitted in December 2022 and November 2023, and has since been revised to address the latest City comments.

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

Yours truly,

NOVATECH

Joshua Audia, P.Eng. Project Engineer | Transportation

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Certification Form for Transportation Impact ttawa Assessment (TIA) Study Program Manager

TIA Plan Reports

On April 14, 2022, the Province's Bill 109 received Royal Assent providing legislative direction to implement the More Homes for Everyone Act, 2022 aiming to increase the supply of a range of housing options to make housing more affordable. Revisions have been made to the TIA guidelines to comply with Bill 109 and streamline the process for applicants and staff.

Individuals submitting TIA reports will be responsible for all aspects of developmentrelated 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 they meet the four criteria listed below.

Certification

~

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 (Update Effective July 2023);



✓ 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;



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

City of Ottawa **Transportation Engineering Services** Planning, Real Estate and Economic Development 110 Laurier Avenue West, 4th fl. Ottawa, ON K1P 1J1 Tel.: 613-580-2424 Fax: 613-560-6006

✓ I am either a licensed or registered¹ professional in good standing, whose field of expertise [check ✓ appropriate field(s)]:

	is either transportation engineeringor transportation planning.				
Dated at Otta (City	awa this 17th day of January , 20 ²⁴ .				
Name:	Jennifer Luong, P.Eng.				
Professional Title:	Senior Project Manager				
	aprilia Sung				

Signature of Individual certifier that they meet the above four criteria



Stamp



¹ 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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EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared for the property located at 3493-3499 Innes Road, in support of Zoning By-Law Amendment and Site Plan Control applications for the site. The subject site is approximately 0.61 hectares in size and is currently occupied by a former sales centre and garage. The subject site is currently served by one driveway to Innes Road.

The subject site is surrounded by the following:

- Residences, followed by Thornecrest Street to the north,
- Innes Road, followed by planned residential development to the south,
- Residences to the east, and
- Commercial uses, followed by Pagé Road to the west.

The proposed development consists of two single-storey commercial buildings, with gross floor areas (GFAs) of 841 m² and 806 m² (i.e. 1,647 m² GFA in total). A total of 69 surface parking spaces will be provided. Access to the development will be provided through a single access to Innes Road approximately in the centre of the subject site, which will have left turns out restricted with the construction of the planned Innes Road/Lamarche Avenue traffic signal and raised median.

The development will be constructed in two phases, with buildout years of 2024 for Building A and 2025 for Building B.

The subject site is designated as 'Corridor – Mainstreet (Innes Road)' on Schedule B8 of the City of Ottawa's Official Plan (2022, Ministry Approved). The current zoning for the properties is 'Residential First Density' R1WW, and therefore a rezoning is required to allow for the proposed development. The site is not located within any Community Design Plan or Secondary Plan areas.

The study area for this report includes the boundary roadway Innes Road, as well as the following intersections:

- Innes Road/Orléans Boulevard;
 - Innes Road/Pagé Road;
- Innes Road/Lamarche Avenue;
- Innes Road/473m East of Pagé 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 buildout year 2025 and the horizon year 2030.

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

Roadway Modifications to Innes Road/Lamarche Avenue

• Signalization of the Innes Road/Lamarche Avenue intersection is anticipated to be in place by the buildout year 2025, per discussions with City staff. The functional design of the roadway modifications at Innes Road/Lamarche Avenue includes auxiliary eastbound right turn, westbound left turn, northbound left turn, and northbound right turn lanes.

- The planned signalization of Innes Road/Lamarche Avenue, which would include a raised median on Innes Road between Pagé Road and Lamarche Avenue, would restrict access to the proposed development to right-in/right-out (RIRO). Passenger car trips arriving to the site from the west and departing to the east would then be required to perform U-turn manoeuvres on Innes Road at Pagé Road and Lamarche Avenue. Larger vehicles will be unable to perform an eastbound U-turn at Innes Road/Lamarche Avenue, and would therefore be required to either make an eastbound right turn onto Lamarche Avenue and turn around within the Orléans Village subdivision, or do a large loop 'around the block' using the arterial road network and come back to the site via the neighbourhood collectors.
- It is proposed that a median break is provided at the proposed access to Innes Road, which would permit eastbound left turns, but restrict outbound left turns from the proposed development. This median break would include an auxiliary eastbound left turn lane, with 20m of storage length and a 55m taper. The maximum eastbound left turn queue lengths at the proposed site access are less than 1m during the peak hours. Therefore, the proposed storage length of 20m is sufficient.
- The signal and raised median related to the 270 Lamarche Avenue application includes a
 westbound left turn lane at Innes Road/Pagé Road with 90m of storage. Implementing the
 proposed median break and auxiliary eastbound left turn lane will require a reduction of the
 westbound left turn storage at Innes Road/Pagé Road from 90m to approximately 50m. The
 reduced storage length is still anticipated to accommodate the 95th-percentile queue lengths
 for this movement during the peak hours.
- The Transportation Association of Canada (TAC)'s Geometric Design Guide for Canadian Roads includes a storage length equation for signalized intersections. The equation recommends a storage length of 40m for the westbound left turn lane at Innes Road/Pagé Road, and therefore reducing the westbound left turn storage from 90m to 50m will maintain a sufficient storage length.

Forecasting

• The proposed development is estimated to generate 31 person trips (including 23 vehicle trips) during the AM peak hour, and 80 person trips (including 60 vehicle trips) during the PM peak hour.

Development Design and Parking

- Pedestrian walkways will connect the front of each proposed building to the existing sidewalk on the north side of Innes Road. These pathways will be approximately 2.5m in width.
- Four bicycle parking spaces are proposed adjacent to the accessible parking spaces in front of each proposed building, for a total of eight bicycle parking spaces on-site.
- OC Transpo's service design guidelines for peak period service is to provide service within a five-minute (400m) walk of home, work, or school, for 95% of urban residents. The main entrances to each proposed building will be within 400m of stops on Innes Road that are served by OC Route 25.
- Any required Transportation Demand Management-supportive design and infrastructure measures in the TDM checklist for non-residential developments have been met.

- Garbage collection will take place at the northeast corner of Building A and northwest corner of Building B. Loading and deliveries will occur at the back of each proposed building (i.e. at the northern end of the subject site). The fire route for the subject site will be located along Innes Road.
- The minimum parking and loading requirements of the City's *Zoning By-Law* will be met.

Boundary Streets

- Innes Road does not meet the target pedestrian level of service (PLOS) or bicycle level of service (BLOS), and meets the target transit level of service (TLOS) and truck level of service (TkLOS).
- Both sides of Innes Road currently include a 2.0m sidewalk with a boulevard width of approximately 3.5m. The best-possible PLOS D is achieved.
- Both directions of Innes Road currently include curbside bike lanes with an approximate width of 2.0m. For roadways with an operating speed of 70 km/h and AADT volumes greater than 10,000 vehicles per day, the *Ontario Traffic Manual (OTM) Book 18* identifies that separated facilities are appropriate. This is identified for the City's consideration.

Access Design

- The proposed access meets all relevant provisions of the City's *Private Approach By-Law* (PABL) except for Section 25(u). A waiver to Section 25(u) of the PABL is requested.
- TAC's *Geometric Design Guide* identifies a minimum corner clearance of 70m between a driveway and a signalized intersection, measuring from the nearest edge of a private approach and the nearest edge of the intersecting street. The western edge of the proposed access is approximately 140m from the nearest edge of Pagé Road, meeting this requirement. The eastern edge of the proposed access is approximately 68m from the nearest edge of Lamarche Avenue, which is marginally short of the requirement. Locating the proposed access within 70m of Lamarche Avenue can be justified, as the access will only be downstream of Lamarche Avenue, and the proposed development is not anticipated to generate queues backing onto Innes Road at the access.

<u>Transit</u>

• The proposed development is projected to generate two transit trips during the AM peak hour and four transit trips during the PM peak hour. No capacity issues are anticipated for OC Routes 25, 131, or 231, based on transit trips generated by the proposed development.

Intersection MMLOS

- The results of the intersection MMLOS analysis can be summarized as follows:
 - No signalized intersections meet the target PLOS;
 - No signalized intersections meet the target BLOS;
 - Innes Road/Pagé Road and Innes Road/473m East of Pagé Road meet the target TLOS, while Innes Road/Orléans Boulevard does not;
 - Innes Road/Orléans Boulevard meets the target TkLOS, while Innes Road/Pagé Road and Innes Road/473m East of Pagé Road do not.

- For any approaches that do not meet the target PLOS, there is limited opportunity in improving any approach to the target without reducing the number of travel lanes or restricting turning movements. There is also limited opportunity in improving the delay score for pedestrians crossing Innes Road without incurring major delays for vehicles.
- All approaches of Innes Road/Orléans Boulevard do not achieve the target BLOS, based on both left turn and right turn characteristics. To achieve this target, a protected intersection would be required, and would involve the removal of all right turn channels. This is identified for the City's consideration.
- The east and west approaches at Innes Road/Pagé Road and the south, east, and west approaches at Innes Road/473m East of Pagé Road, do not meet the target BLOS based on left turn characteristics. Two-stage left-turn bike boxes would be required to achieve the target, and would therefore require restriction to right turns on red (RTOR). It is recommended that if bike boxes are pursued, that they are implemented holistically along the Innes Road where applicable, rather than at only select intersections.
- All approaches at Innes Road/Orléans Boulevard do not meet the target TLOS. It is anticipated that transit delays will improve once isolated transit priority measures are implemented on Innes Road.
- The east and west approaches at Innes Road/Pagé Road and the east approach at Innes Road/473m East of Pagé Road do not achieve the target TkLOS. No modifications to the curb radii are recommended, as Pagé Road is primarily a residential street with low truck volumes, and it is anticipated that large trucks do not enter and exit 3615 Innes Road for loading and deliveries, given the layout and size.

Existing Intersection Operations

- During the AM peak hour, the southbound right turn and eastbound left turn movements at Innes Road/Orléans Boulevard operate at a failing vehicular level of service. To meet the target, a reduction of approximately 140 southbound right turning vehicles and 10 eastbound left turning vehicles would be required. The average (50th-percentile) and maximum (95thpercentile) queue lengths of the southbound right turn movement at Innes Road/Orléans Boulevard exceed the storage length provided.
- During the PM peak hour, the eastbound through movement at Innes Road/Orléans Boulevard operate at a failing vehicular level of service. To meet the target, a reduction of approximately 100 eastbound through vehicles would be required. The maximum queue length of the southbound left turn movement at Innes Road/Orléans Boulevard exceeds the storage length provided.

Background Intersection Operations

• During the AM peak hour, the southbound right turn and westbound through movements at Innes Road/Orléans Boulevard operate at a failing vehicular level of service. To meet the target, a reduction of approximately 150 southbound right turning vehicles and 30 westbound through vehicles would be required. The average and maximum queue lengths of the southbound right turn movements exceed the storage length provided.

- During the PM peak hour, the southbound left turn and eastbound through movements at Innes Road/Orléans Boulevard, and the westbound left turn movements at Innes Road/ Pagé Road and Innes Road/Lamarche Avenue operate at a failing vehicular level of service. To meet the target, a reduction of approximately 30 southbound right turning vehicles and 280 eastbound through vehicles at Innes Road/Orléans Boulevard would be required. The maximum queue length of the southbound left turn movement at Innes Road/Orléans Boulevard exceeds the storage length provided.
- To mitigate failing movements at Innes Road/Orléans Boulevard, seven seconds of green time for the northbound/southbound phases have been reallocated to the eastbound/ westbound through phases in the AM peak hour. For the PM peak hour, the cycle length of all study area intersections has been increased from 110 to 130 seconds, with most or all of this additional green time added to the eastbound/westbound phases.
- To mitigate failing westbound left turn movements at Innes Road/Pagé Road and Innes Road/Lamarche Avenue in the PM peak hour, protected plus permitted left turn phasing is identified for the City's consideration. With this phasing, a reduction of approximately 140 eastbound through vehicles at Innes Road/Lamarche Avenue in the PM peak hour would be required to meet the target vehicular level of service. It is understood that this type of phasing is typically implemented after the City reviews the actual performance of the intersections being studied.

Total Intersection Operations

- The addition of site-generated traffic is anticipated to have a marginal impact to peak hour traffic operations within the study area. During the peak hours, the maximum westbound through queue lengths at Innes Road/Pagé Road do not extend upstream to the proposed site access. The maximum eastbound through queue at Innes Road/Lamarche Avenue extends upstream through the Innes Road/Pagé Road intersection during the PM peak hour.
- The proposed development is recommended from a transportation perspective.

1.0 SCREENING

1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared for the property located at 3493-3499 Innes Road, in support of Zoning By-Law Amendment and Site Plan Control applications for the site. The subject site is approximately 0.61 hectares in size and is currently occupied by a former sales centre and garage. The subject site is currently served by one driveway to Innes Road.

The subject site is surrounded by the following:

- Residences, followed by Thornecrest Street to the north,
- Innes Road, followed by planned residential development to the south,
- Residences to the east, and
- Commercial uses, followed by Pagé Road to the west.

An aerial of the vicinity around the subject site is provided in Figure 1.

1.2 Proposed Development

The proposed development consists of two single-storey commercial buildings, with gross floor areas (GFAs) of 841 m² and 806 m² (i.e. 1,647 m² GFA in total). A total of 69 surface parking spaces will be provided. Access to the development will be provided through a single access to Innes Road approximately in the centre of the subject site, which will have left turns out restricted with the construction of the planned Innes Road/Lamarche Avenue traffic signal and raised median.

The development will be constructed in two phases, with buildout years of 2024 for Building A and 2025 for Building B.

The subject site is designated as 'Corridor – Mainstreet (Innes Road)' on Schedule B8 of the City of Ottawa's Official Plan (2022, Ministry Approved). The current zoning for the properties is 'Residential First Density' R1WW, and therefore a rezoning is required to allow for the proposed development. The site is not located within any Community Design Plan or Secondary Plan areas.

A copy of the preliminary site plan is included in **Appendix A**.

1.3 Screening Form

The City's *2023 Revised 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 over 60 peak hour person trips; further assessment is **required** based on this trigger.
- Location Triggers The development proposes a new access to Innes Road, which is a designated Crosstown Bikeway and Transit Priority Corridor, and the development is located within a Design Priority Area; further assessment is **required** based on this trigger.
- Safety Triggers The proposed driveway is located within the area of influence of an adjacent traffic signal; further assessment is required based on this trigger.

Figure 1: View of the Subject Site



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.

Innes Road is an arterial roadway that generally runs on an east-west alignment between St. Laurent Boulevard and Dunning Road. West of St. Laurent Boulevard, the roadway continues as Industrial Avenue. Between the western and eastern intersections with the Blackburn Hamlet Bypass, Innes Road acts as a major collector. Within the study area, Innes Road has a five-lane urban cross-section with a centre two-way left turn lane (TWLTL) between Pagé Road and Frank Bender Street, and a four-lane divided urban cross-section with turn lanes at intersections west of Pagé Road. Bike lanes and sidewalks are provided on both sides of the roadway, and the roadway has a posted speed limit of 60 km/h. Innes Road is classified as a truck route, allowing full loads. Street parking is not permitted. The City of Ottawa's Official Plan identifies a right-of-way (ROW) protection of 37.5m at Innes Road within the study area, and therefore a widening is required along the site frontage.

Orléans Boulevard is an arterial roadway that generally runs on a north-south alignment between St. Joseph Boulevard and Navan Road. North of St. Joseph Boulevard, Orléans Boulevard operates as a major collector, collector, or local roadway. Within the study area, Orléans Boulevard has a four-lane divided urban cross-section, sidewalks on both sides of the roadway, and a posted speed limit of 50 km/h. The speed limit increases to 60 km/h approximately 90m north of Innes Road. Orléans Boulevard is classified as a truck route with restricted loads north of Innes Road, and is not classified as a truck route south of Innes Road. Street parking is not permitted.

Pagé Road runs on a north-south alignment between Innes Road and Renaud Road, and has a posted speed limit of 40 km/h. North of Innes Road, Pagé Road is a local roadway with a two-lane undivided rural cross-section and an at-grade sidewalk on the west side. South of Innes Road, Pagé Road is a collector roadway with a two-lane undivided urban cross-section and sidewalks on both sides of the roadway. Pagé Road is not classified as a truck route. Street parking is permitted on one side of the roadway.

Lamarche Avenue is a collector roadway that runs on a north-south alignment between Innes Road and Ponthieu Crescent/Beaugency Street. Within the study area, Lamarche Avenue has a two-lane undivided urban cross-section, a multi-use pathway on the west side, and an unposted speed limit of 50 km/h. Lamarche Avenue is not classified as a truck route. Street parking is permitted on one side of the roadway.

Boyer Road is a local roadway north of Innes Road, and runs on a north-south alignment between Innes Road and Meadowglen Drive. The roadway terminates in a cul-de-sac immediately north of Innes Road. North of Meadowglen Drive, Boyer Road is a collector roadway which runs on a north-south alignment between Meadowglen Drive and Orléans Boulevard. Within the study area, Boyer Road has a two-lane undivided urban cross-section, with no sidewalks, and a posted speed limit of 40 km/h. Boyer Road is not classified as a truck route. Street parking is permitted on one side of the roadway.

The roadway network of the greater area surrounding the subject site is illustrated in Figure 2.

Figure 2: Roadway Network



2.1.2 Intersections

Innes Road/Orléans Boulevard

- Signalized four-legged intersection
- North/South Approaches (Orléans Boulevard): one left turn lane, two through lanes, and one channelized right turn lane
- East Approach (Innes Road): one left turn lane, two through lanes, one transit queue jump lane, and one channelized right turn lane
- West Approach (Innes Road): two left turn lanes, two through lanes, and one channelized right turn lane
- Eastbound bike lanes provided on east leg; westbound bike lanes provided on east/west legs



Innes Road/Pagé Road

- Signalized four-legged intersection
- North/South Approaches (Pagé Road): one shared left turn/through/right turn lane
- East/West Approaches (Innes Road): one left turn lane, one through lane, and one shared through/right turn lane
- Bike lanes on east and west approaches

Innes Road/Lamarche Avenue

- Unsignalized three-legged intersection
- South Approach (Lamarche Avenue): one shared left turn/right turn lane
- East Approach (Innes Road): one two-way left turn lane and two through lanes
- West Approach (Innes Road): one two-way left turn lane, one through lane, and one shared through/right turn lane
- Bike lanes on east and west approaches

Innes Road/473m East of Pagé Road

- Signalized four-legged intersection
- North/South Approaches (accesses to 3604-3636 or 3615 Innes Road): one shared left turn/through/right turn lane
- East/West Approaches (Innes Road): one left turn lane, one through lane, and one shared through/right turn lane
- Bike lanes on east and west approaches







2.1.3 Driveways

In accordance with the *2017 TIA Guidelines*, a review of adjacent driveways along the boundary roads are provided as follows:

Innes Road, North Side

- Two driveways to commercial uses and a gas station at 3469 Innes Road
- Ten driveways to residences at 3437, 3443, 3519, 3523, 3533, 3543, 3555, 3565, and 3581 Innes Road

Innes Road, South Side

- Three driveways to residences at 3484, 3554, and 3564 Innes Road
- One driveway to a former driving range at 240 Lamarche Avenue
- Two driveways to commercial uses at 3534 and 3544 Innes Road

2.1.4 Pedestrian and Cycling Facilities

Concrete sidewalks are provided on both sides of Orléans Boulevard, Innes Road east of Orléans Boulevard, and Pagé Road south of Innes Road. Sidewalks are also provided on the west side of Pagé Road north of Innes Road, and on the north side of Innes Road west of Orléans Boulevard. An asphalt multi-use pathway is provided on the west side of Lamarche Avenue. On-street bike lanes are provided in both directions on Innes Road east of Orléans Boulevard. West of Orléans Boulevard, the westbound bike lane on Innes Road continues before connecting to a multi-use pathway west of the study area.

In the City of Ottawa's primary cycling network, Innes Road is designated as both a Spine Route and Crosstown Bikeway, Pagé Road is designated as a Spine Route, and Orléans Boulevard and Boyer Road are designated as Local Routes.

2.1.5 Transit

The locations of bus stops in the vicinity of the subject site are described in **Table 1** and shown in **Figure 3**, and a summary of the 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**.

Stop	Location	Routes Serviced
#1194	North side of Innes Road, west of Pagé Road	25, 612, 648
#1219	North side of Innes Road, west of Boyer Road	25, 612, 648
#1399	South side of Meadowglen Drive, west of Loranger Court	131, 231, 611, 631, 648
#1401	North side of Meadowglen Drive, west of Loranger Court	131, 231, 611, 631, 648
#7735	South side of Innes Road, east of Pagé Road	25, 612, 648
#7751	South side of Meadowglen Drive, between Pagé Road and Thornecrest Street	131, 231, 611, 631, 648
#7755	North side of Meadowglen Drive, east of Aspenview Way	131, 231, 611, 631, 648
#8129	South side of Innes Road, west of Boyer Road	25, 612, 648

Table 1: OC Transpo Transit Stops

Route	From ↔ To	Frequency
25	Millennium ↔	All day service, seven days a week;
		7- to 30-minute neadways
121	Fallingbrook ↔	All day service, seven days a week;
131	Chapel Hill	30-minute headways
001	Meadowglen ↔	Peak period service, weekdays only;
231	Blair	30-minute headways in peak direction only
611	Orléans ↔	Service at celest times on echoel days only
011	Gisèle Lalonde H.S.	Service at select times on school days only
610	Renaud ↔ Beatrice Desloges H.S./	Convine at aclest times on acheal days only
012	Gisèle Lalonde H.S.	Service at select times on school days only
621	Chapel Hill ↔	Convine at aslast times on ashaal days only
031	Colonel By H.S./Gloucester H.S.	Service at select times on school days only
640	Orléans ↔	Convine at aslast times on ashaal days anly
648	Louis Riel H.S.	Service at select times on school days only

 Table 2: OC Transpo Route Information

Figure 3: OC Transpo Bus Stop Locations



2.1.6 Area Traffic Management

Within the study area, there are no Area Traffic Management (ATM) studies that are in progress.

Additionally, three speed humps have been implemented on Pagé Road between Innes Road and Meadowglen Drive. Signage at each speed bump indicate that vehicles are intended to slow to 30 km/h at those points, where Pagé Road otherwise has a posted speed limit of 40 km/h.

2.1.7 Existing Traffic Volumes

Weekday traffic counts completed by the City or coordinated by Parsons in support of a different development application at 270 Lamarche Avenue (formerly 3490 Innes Road), which is discussed further in Section 2.2.2. These counts have been used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at the study area intersections. These counts were completed on the following dates.

•	Innes Road/Orléans Boulevard	May 3, 2017	(City)
•	Innes Road/Pagé Road	January 8, 2019	(City)
•	Innes Road/Lamarche Avenue	August 5, 2021	(Parsons)
•	Innes Road/473m East of Pagé Road	January 31, 2019	(City)

Traffic count data for the study area intersections are included in **Appendix D**. Peak hour pedestrian, cyclist, and vehicular traffic volumes within the study area are shown in **Figure 4**.





2.1.8 Collision Records

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

The collision data has been evaluated to determine if there are any identifiable collision patterns, which are defined in the City's *2017 TIA Guidelines* as 'more than six collisions in five years for any one movement.' Due to the COVID-19 pandemic, it is anticipated that reduced traffic volumes in 2020 resulted in fewer collisions than a typical year. Therefore, the number of collisions at each intersection from January 1, 2015 through December 31, 2020 have been reviewed, and is summarized in **Table 3**.

|--|

Intersection or Street Segment		Total				
intersection of Street Segment	Angle	Rear End	Sideswipe	Turn Mvmt	SMV ⁽¹⁾ /Other	TOtal
Innes Road/ Orléans Boulevard	7	40	5	18	5	75
Innes Road/ Pagé Road	4	14	2	7	6	33
Innes Road/ Lamarche Avenue	-	-	-	-	-	0
Innes Road/ 473m East of Pagé Road	1	4	-	-	2	7
Innes Road btwn Orléans Boulevard & Pagé Road	-	7	2	-	-	9
Innes Road btwn Pagé Road & 473m East of Pagé Road	5	6	3	1	3	18
Innes Road btwn 473m East of Pagé Road & Viseneau Drive	2	3	2	-	-	7

1. SMV = Single Motor Vehicle

Innes Road/Orléans Boulevard

A total of 75 collisions were reported at this intersection over the last six years, of which there were seven angle impacts, 40 rear-end impacts, five sideswipe impacts, 18 turning movement impacts, and five single vehicle/other impacts. Nineteen collisions resulted in injuries, but none caused fatalities. Thirty-four of the 75 collisions (45%) occurred in poor driving conditions. Three collisions involved pedestrians and no collisions involved cyclists.

Of the seven angle impacts, all involved a southbound vehicle and a westbound vehicle. Five of the seven impacts involved a southbound right-turning vehicle and a westbound through vehicle, and were the result of southbound drivers improperly yielding the right-of-way to westbound drivers.

Of the 40 rear-end impacts, five involved northbound vehicles (one unknown incident and four rightturn incidents), eight involved southbound vehicles (one left-turn incident, three through incidents, and four right-turn incidents), 16 involved eastbound vehicles (three left-turn incidents, 12 through incidents, and one right-turn incident), and 11 involved westbound vehicles (one unknown incident, nine through incidents, and one right-turn incident). The number of rear-end collisions are likely a function of high traffic volumes at this intersection.

Of the 18 turning movement impacts, 11 involved a northbound left-turning vehicle and a southbound through vehicle, five involved a southbound left-turning vehicle and a northbound through vehicle, and two involved a westbound left-turning vehicle and an eastbound through vehicle. The northbound left turn has protected plus permitted phasing during the peak hours, and a fully protected left turn phase would likely reduce this type of collision.

Of the five single vehicle/other impacts, three involved pedestrians. Of these three impacts, two involved a northbound left turning vehicle failing to yield the right-of-way and one involved an eastbound through vehicle disobeying the traffic control.

Innes Road/Pagé Road

A total of 33 collisions were reported at this intersection over the last six years, of which there were four angle impacts, 14 rear-end impacts, two sideswipe impacts, seven turning movement impacts, and six single vehicle/other impacts. Ten collisions resulted in injuries, but none caused fatalities. Twenty of the 33 collisions (61%) occurred in poor driving conditions. Three collisions involved pedestrians and one collision involved a cyclist.

Of the 14 rear-end impacts, five involved eastbound through vehicles and nine involved westbound through vehicles. The number of rear-end collisions are likely a function of high traffic volumes on Innes Road.

Of the six single vehicle/other impacts, three involved pedestrians. Of these three impacts, two involved a northbound left turning vehicle failing to yield the right-of-way and one involved a northbound through vehicle (unknown circumstances).

Innes Road/473m East of Pagé Road

A total of seven collisions were reported at this intersection over the last six years, of which there was one angle impact, four rear-end impacts, and two single vehicle/other impacts. Two collision resulted in injuries, and none caused fatalities. Two of the seven collisions (28%) occurred in poor driving conditions. One collision involved a pedestrian, and none involved cyclists.

Innes Road between Orléans Boulevard and Pagé Road

A total of nine collisions were reported along this segment over the last six years, of which there were seven rear-end impacts and two sideswipe impacts. One collision resulted in injuries, but none caused fatalities. Three of the nine collisions (33%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

Innes Road between Pagé Road and 473m East of Pagé Road

A total of 18 collisions were reported along this segment over the last six years, of which there were five angle impacts, six rear-end impacts, three sideswipe impacts, one turning movement impact, and three single vehicle/other impacts. Four collisions resulted in injuries, but none caused fatalities. Six of the 18 collisions (33%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

Innes Road between 473m East of Pagé Road and Viseneau Drive

A total of seven collisions were reported along this segment over the last six years, of which there were two angle impacts, three rear-end impacts, and two sideswipe impacts. Two collisions resulted in injuries, but none caused fatalities. Three of the seven collisions (43%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

2.2 Planned Conditions

2.2.1 Planned Roadway and Transit Projects

The City's 2013 Transportation Master Plan (TMP) identifies future roadway projects within the study area in its Affordable Road Network and Network Concepts. The Network Concept includes a widening of the existing Blackburn Hamlet Bypass from four to six lanes, between the western intersection with Innes Road and Navan Road. In the Affordable Network, the Blackburn Hamlet Bypass Extension was identified as a Phase 2 (2020-2025) project, and would include a new four-lane roadway between Innes Road and Navan Road.

However, due to feasibility concerns, the Environmental Assessment (EA) process was reinitiated for the Brian Coburn Boulevard/Cumberland Transitway Extension. The study produced interim and ultimate conditions for a new alignment of the Brian Coburn Boulevard/Cumberland Transitway Extension. In the interim condition, bus lanes will be provided in both directions on Innes Road at Anderson Road, and in both directions on the Blackburn Hamlet Bypass at the western intersection with Innes Road and at Navan Road. In the ultimate condition, the Brian Coburn Boulevard extension will generally follow the alignment of Renaud Road south of the Blackburn Hamlet Bypass, with the Cumberland Transitway running immediately north of the extension.

Signalization of the Innes Road/Lamarche Avenue intersection is anticipated to be in place by the buildout year 2025, per discussions with City staff. As part of the development at 270 Lamarche Avenue (formerly 3490 Innes Road), which is described in Sections 2.2.2 and 3.2.2, Road Modification Approval (RMA) support documents were submitted for the future Innes Road/Lamarche Avenue signal, which is eligible for funding under the Development Charges By-Law. The functional design of the proposed signalized intersection at Innes Road/Lamarche Avenue includes auxiliary eastbound right turn, westbound left turn, northbound left turn, and northbound right turn lanes. A screenshot of the functional design is included in **Figure 5**.

The Affordable Rapid Transit and Transit Priority (RTTP) Network identifies Innes Road and Brian Coburn Boulevard west of Tenth Line Road as Transit Priority Corridors with Isolated Measures. Transit signal priority and queue jump lanes will be implemented at select intersections. The TMP envisioned peak period bus lanes and transit signal priority measures for the Blackburn Hamlet Bypass between Innes Road and Brian Coburn Boulevard, which may have included the repurposing of general purpose lanes.

The 2031 RTTP Network Concept includes the Cumberland Transitway, which will run between Blair Road and Frank Kenny Road. A corridor for the future transitway has been reserved by the City, immediately north of Brian Coburn Boulevard (south of the study area).

The 2013 Ottawa Cycling Plan identifies a Phase 3 (2026-2031) project north of the study area. The Orléans East-West Neighbourhood Bikeway project will include shared use lanes on Viseneau Drive and Meadowglen Drive. Additionally, a major pathway link between Innes Road and Brian Coburn Boulevard is identified within the East Urban Community, which is anticipated to be constructed beyond the timeline of this study.

The 2013 Ottawa Pedestrian Plan identifies a Phase 3 (2026-2031) project north of the study area. A new sidewalk will be provided along the entire south/west side of Meadowglen Drive between Forest Valley Drive and Boyer Road, in addition to the existing sidewalk on the entire north/east side of Meadowglen Drive.



Figure 5: Functional Design of Innes Road/Lamarche Avenue Signal

2.2.2 Other Area Developments

In proximity of the proposed development, there are multiple other developments that have recently been completed, are under construction, approved, or are in the approval process. These developments are summarized as follows.

Orléans Village Subdivision

A Transportation Impact Study (TIS) was prepared by Parsons in December 2016 and later revised in April 2017 and August 2017, in support of a subdivision that will be accessed via Innes Road/ Lamarche Avenue. The development consists of 534 residential dwellings. Per the TIS, buildout of Phase 1 of the development was anticipated to occur in 2021, and full buildout was anticipated to occur in 2024. The TIS also recommended signalization of the Innes Road/Lamarche Avenue intersection, as well as a westbound left turn lane and an eastbound right turn lane. It is understood that these improvements will now be implemented as part of the 270 Lamarche Avenue (formerly 3490 Innes Road) Draft Plan.

245-275 Lamarche Avenue

A TIA was prepared by CGH Transportation in April 2022 and revised in July 2022, in support of a residential development. The development includes 103 townhouse dwellings and 68 back-to-back dwellings. Per the TIA, buildout of the development is anticipated to occur in 2025.

3437 and 3443 Innes Road

A TIA was prepared by Novatech in April 2022, in support of a mixed-use development. The development includes a single six-storey building, with approximately 5,530 ft² of ground-floor commercial space and 123 residential dwellings. Per the TIA, buildout of the development is anticipated to occur in 2023.

270 Lamarche Avenue (formerly 3490 Innes Road)

A TIA was prepared by Parsons in October 2021 and revised in April 2023, in support of a mixeduse development. Four options are currently being considered, and the TIA included analysis for the option that would generate the most traffic during the weekday peak hours. This option includes five mid-rise buildings with 525 residential dwellings and approximately 41,300 ft² of ground-floor commercial/retail uses. Buildout of the development is anticipated to occur in three phases, with an ultimate buildout year of 2031.

3598 Innes Road

A TIA was prepared by Tranplan Associates in September 2018, in support of an automatic car wash facility. This facility is now open, but was not completed prior to the traffic counts included in Section 2.1.7.

3610 Innes Road

A TIA was prepared by Novatech in October 2019 and later revised in April 2020, in support of a subdivision. The development consists of 456 residential dwellings. Per the TIA, buildout of the development was anticipated to occur in 2023.

<u>3817-3843 Innes Road</u>

A TIA was prepared by D.J. Halpenny & Associates Ltd. in March 2021, in support of a residential development. The development includes three low- or mid-rise buildings, with a total of 97 residential dwellings. Per the TIA, buildout of the development is anticipated to occur in 2024.

Richcraft Trailsedge North

A TIA was prepared by Castleglenn Consultants in April 2021, in support of a subdivision. The development consists of 2,040 residential dwellings and an employment area that will support approximately 830 jobs. Per the TIA, buildout of the residential portion is anticipated to occur in 2047, and the buildout year of the employment portion is unknown at the time of writing.

A figure outlining the location of all the developments above is included in Figure 6.

2.3 Study Area and Time Periods

The study area for this report includes the boundary roadway Innes Road, as well as the following intersections:

- Innes Road/Orléans Boulevard;
- Innes Road/Pagé Road;
- Innes Road/Lamarche Avenue;
- Innes Road/473m East of Pagé 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 buildout year 2025 and the horizon year 2030.

Figure 6: Other Area Developments



2.4 Exemptions Review

This module reviews possible exemptions from the final Transportation Impact Assessment, as outlined in the *2023 Revised TIA Guidelines*. The applicable exemptions for this site are shown in **Table 4**.

Module	Element	Exemption Criteria	Status
Design Review	Component		
4.1	4.1.2 Circulation and Access	Required for site plans	Not Exempt
Development Design	<i>4.1.3</i> New Street Networks	 Required for plans of subdivision 	Exempt
4.2 Parking	<i>4.2.1</i> Parking Supply	 Required for site plans 	Not Exempt
Network Impac	t Component		
4.5 Transportation Demand Management	All elements	 Not required for non-residential site plans expected to have fewer than 60 employees and/or students on location at any given time 	Exempt
4.6 Neighbourhood Traffic Calming	All elements	 Required if the development meets all of the following criteria: Access to Collector or Local; "Significant sensitive land use presence" exists, where there is at least two of the following adjacent to the subject street segment: School (within 250m walking distance); Park; Retirement / Older Adult Facility (i.e. long-term care and retirement homes); Licenced Child Care Centre; Community Centre; or 50%, or greater, of adjacent property along the route(s) is occupied by residential lands and a minimum of 10 occupied residential units are present on the route. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision; At least 75 site-generated auto trips; Site trip infiltration is expected. Site traffic will increase peak hour vehicle volumes along the route by 50% or more. 	Exempt
4.8 Network Concept	All elements	 Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by the established zoning 	Exempt

Table 4: TIA Exemptions

Based on the foregoing, the following modules will be included in the TIA report:

Design Review Component

- Module 4.1: Development Design
- Module 4.2: Parking
- Module 4.3: Boundary Streets
- Module 4.4: Access Design

Network Impact Component

- Module 4.7: Transit
- Module 4.9: Intersection Design

3.0 FORECASTING

3.1 Development-Generated Travel Demand

3.1.1 Trip Generation

The existing development is conservatively assumed to generate no trips during the weekday peak hours. The proposed development will consist of approximately 17,736 ft² GFA of commercial space. Building A is known to be a mattress store, while Building B is anticipated to have office or retail tenants. For the purposes of this review, Building B is assumed to be occupied by one or more retail uses, as this is a higher trip generator than office uses.

Using the *ITE Trip Generation Manual, 11th Edition*, trips generated by Building A have been estimated using the rates corresponding to the Furniture Store land use (code 890), and trips generated by Building B have been estimated using the rates corresponding to the Strip Retail Plaza land use (code 822). Trips have been converted to person trips using an adjustment factor of 1.28, consistent with the City's *2017 TIA Guidelines*.

The estimated number of person trips generated by the proposed development is summarized in **Table 5**.

Land Llea	ITE Codo	GEA	AM P	eak Hour	(pph)	PM Peak Hour (pph)		
Lanu USe	TIE Code	GFA	IN	OUT	тот	IN	OUT	TOT
Furniture Store	890	9,056 ft ²	3	1	4	3	3	6
Strip Retail Plaza	822	8,680 ft ²	16	11	27	37	37	74
		Total	19	12	31	40	40	80

Table 5: Proposed Development – Peak Hour Trip Generation

1. pph: Person Trips per Peak Hour

The *TRANS Trip Generation Manual Summary Report*, prepared in October 2020 by WSP, includes peak hour mode share data for commercial trips in the Orléans district. The mode shares during the peak hours for commercial generators in Orléans can be summarized as follows:

- Auto Driver: 77% in AM peak, 71% in PM peak;
- Auto Passenger: 14% in AM peak, 20% in PM peak;
- Transit: 3% in AM peak, 2% in PM peak;
- Cyclist: 0% in AM peak, 1% in PM peak;
- Pedestrian: 6% in AM peak, 6% in PM peak.

The mode shares for the proposed development have been assumed to be equal in both weekday peak hours, but generally follow the observed mode shares described above. Therefore, the assumed peak hour mode shares for trips generated by the proposed development can be summarized as 75% auto driver, 15% auto passenger, 5% transit, 0% cyclist, and 5% pedestrian.

A breakdown of the above person trips by mode share is shown in **Table 6**.

Travel Mode	Mode Share	AM Peak Hour			PM Peak Hour		
		IN	OUT	тот	IN	OUT	тот
Furniture Store Person Trips		3	1	4	3	3	6
Auto Driver	75%	3	-	3	2	2	4
Auto Passenger	15%	-	1	1	1	1	2
Transit	5%	-	-	0	-	-	0
Cyclist	0%	-	-	0	-	-	0
Pedestrian	5%	-	-	0	-	-	0
Retai	l Person Trips	16	11	27	37	37	74
Auto Driver	75%	12	8	20	28	28	56
Auto Passenger	15%	2	2	4	5	5	10
Transit	5%	1	1	2	2	2	4
Cyclist	0%	-	-	0	-	-	0
Pedestrian	5%	1	-	1	2	2	4
Tota	l Person Trips	19	12	31	40	40	80
Auto Driver		15	8	23	30	30	60
Auto Passenger		2	3	5	6	6	12
Transit		1	1	2	2	2	4
Cyclist				0			0
Pedestrian		1		1	2	2	4

Table 6: Proposed Development – Peak Hour Trips by Mode Share

From the previous table, the proposed development is estimated to generate 31 person trips (including 23 vehicle trips) during the AM peak hour, and 80 person trips (including 60 vehicle trips) during the PM peak hour.

Peak hour pass-by trips have been estimated based on the average rates identified in the *ITE Trip Generation Manual, 11th Edition.* Using these average rates, the assumed pass-by rates for the development are 0% during the AM peak hour for both land uses, and 53% and 40% during the PM peak hour for the furniture store and retail uses respectively. These rates have been applied to the vehicle trips identified above.

The primary and pass-by trip generation for the proposed development is presented in Table 7.

Trin Tyne	AM Peak Hour (vph)			PM Peak Hour (vph)		
пр туре	IN	OUT	тот	IN	OUT	ТОТ
Furniture Store Trips	3	-	3	2	2	4
Pass-by (0% AM, 53% PM)	-	-	0	1	1	2
Primary Furniture Store Trips	3	-	3	1	1	2
Retail Trips	12	8	20	28	28	56
Pass-by (0% AM, 40% PM)	-	-	0	12	12	24
Primary Retail Trips	12	8	20	16	16	32

Table 7: Primary and Pass-by Trips

From the previous table, the proposed development is estimated to generate 23 primary vehicle trips during the AM peak hour and 34 primary vehicle trips during the PM peak hour.

3.1.2 Trip Distribution and Assignment

The assumed distributions of primary and pass-by trips generated by the proposed development have been derived from existing traffic patterns within the study area. Since the proposed development will be commercial in nature, the two-way midday peak hour volumes have been considered for the primary trip distribution.

Therefore, the assumed trip distributions for the proposed development can be summarized as follows:

Primary Trip Distribution

Pass-by Trip Distribution

Westbound via Innes Road: 100%.

- To/from the north via Orléans Boulevard: 15%;
- To/from the south via Orléans Boulevard: 10%;
- To/from the east via Innes Road: 35%;
- To/from the west via Innes Road: 40%.

All trips will enter and exit the subject site via the access to Innes Road. Based on the planned modifications to the Innes Road/Lamarche Avenue intersection shown in **Figure 5**, a raised median would be constructed on Innes Road between Pagé Road and Lamarche Avenue, and it is this modification that would restrict left turns in and out in the future. To accommodate the subject site access, a median break for eastbound left turns has been considered in the analysis of this TIA. Further analysis and justification of a median break at the proposed access is included in Section 4.4.

Based on the above, for the purposes of this report, it is assumed that trips exiting to the east will perform a U-turn at Innes Road/Pagé Road. Due to this, it is assumed that all pass-by trips will arrive from the east and depart to the west.

3.2 Background Traffic

3.2.1 General Background Growth Rate

A rate of background growth has been established through a review of the City's 2013 TMP and Strategic Long-Range Model, comparing snapshots of 2011 and 2031 AM peak hour volumes. Section 2.3 of the TMP projects a 33% growth in population for the Orléans area between 2011 and 2031, translating to an annual growth rate of approximately 1.4%. The snapshots indicate traffic volume reductions on Innes Road due to the opening of Brian Coburn Boulevard, which acts as an alternate east-west arterial route. The snapshots do not consistently identify traffic increases or reductions on Orléans Boulevard between 2011 and 2031. To account for potential developments in the area that are not discussed below, a 1% background growth has been applied to the through volumes on the arterial roadways within the study area (i.e. Innes Road and Orléans Boulevard).

Relevant excerpts of the 2013 TMP and Strategic Long-Range Model are included in Appendix F.

3.2.2 Other Area Developments

In proximity of the proposed development, there are multiple other developments that have recently been completed, are under construction, approved, or are in the approval process. These developments are summarized as follows. Relevant excerpts of the transportation studies that are considered in the 2025 and 2030 background conditions are included in **Appendix G**.

Orléans Village Subdivision

This subdivision consists of 534 residential dwellings, and is currently under construction. In the TIS, 50% of the development was anticipated to be built out in 2020, and full buildout is anticipated to occur in 2024. Traffic generated by Phase 1 is assumed to have been captured by the existing traffic count at Innes Road/Lamarche Avenue, but not at the other study area intersections. To represent ultimate buildout of this development in the 2025 and 2030 background conditions, projected traffic generated by only Phase 2 has been added to the volumes at Innes Road/Lamarche Avenue and traffic generated by both Phase 1 (observed) and Phase 2 (projected) has been added to the volumes at all other study area intersections.

245-275 Lamarche Avenue

The development includes 103 townhouse dwellings and 68 back-to-back dwellings. Per the TIA, buildout of the development is anticipated to occur in 2025. Therefore, volumes generated by this development have been added to the 2025 and 2030 background conditions.

3437 and 3443 Innes Road

The development includes approximately 5,530 ft² of ground-floor commercial space and 123 residential dwellings. Per the TIA, buildout of the development is anticipated to occur in 2023. Therefore, volumes generated by this development have been added to the 2025 and 2030 background conditions.

3490 Innes Road

Five mid-rise buildings with 525 residential dwellings and approximately 41,300 ft² of ground-floor commercial/retail uses are proposed, and this application is currently in the approval process. Buildout of the development is anticipated to occur in 2031. Traffic generated by this development has conservatively been added to the 2030 background conditions.

3598 Innes Road

An automatic car wash facility is now open, but was not operational prior to the traffic counts included in Section 2.1.7. Traffic generated by this development has been added to the 2025 and 2030 background conditions, based on the TIA prepared by Tranplan Associates.

3610 Innes Road

This development consists of 456 residential dwellings, and is now approved. Per the TIA, buildout of Phase 1 was anticipated to occur in 2021 and buildout of Phase 2 was anticipated to occur in 2023. Therefore, traffic generated by this development has been added to the 2025 and 2030 background conditions.

<u>3817-3843 Innes Road</u>

This proposed development includes three low- or mid-rise buildings with a total of 97 residential dwellings, and this application is currently in the approval process. Per the TIA, buildout of the development is anticipated to occur in 2024. Therefore, traffic generated by this development has been added to the 2025 and 2030 background conditions.

Richcraft Trailsedge North

Approximately 2,040 residential dwellings and an employment area that will support 830 jobs are proposed. Per the TIA, buildout of the residential portion is anticipated to occur in 2047 (with buildout of Phase 1 occurring in 2037), and the buildout year of the employment portion is unknown at the time of writing. Since this buildout year is beyond the horizon year of this study, traffic generated by this development has not been added to the 2025 or 2030 background conditions.

3.2.3 Existing Traffic Volume Balancing

To account for discrepancies in the different traffic counts conducted, the existing through traffic volumes have been balanced throughout the study area for any through movements with discrepancies greater than 10%. The balanced existing traffic volumes are shown in **Figure 7**.

3.3 Future Traffic Conditions

The figures below present the following traffic conditions:

- Proposed site-generated primary traffic volumes are shown in Figure 8;
- Proposed site-generated pass-by traffic volumes are shown in Figure 9;
- Other area development-generated traffic volumes in 2025 are shown in Figure 10;
- Other area development-generated traffic volumes in 2030 are shown in Figure 11;
- Background traffic volumes in 2025 are shown in Figure 12;
- Background traffic volumes in 2030 are shown in Figure 13;
- Total traffic volumes in 2025 are shown in Figure 14;
- Total traffic volumes in 2030 are shown in Figure 15.

Figure 7: Balanced Existing Traffic Volumes







Figure 9: Proposed Site-Generated Pass-by Traffic Volumes

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ORLEAN	PAGE		LAMARC	Δ LEGEND Ш xx AM Peak Hour (veh/h) (yy) PM Peak Hour (veh/h) Signalized Intersection Unsignalized Intersection





Figure 11: 2030 Other Area Development-Generated Traffic Volumes







Figure 13: 2030 Background Traffic Volumes






Figure 15: 2030 Total Traffic Volumes



3.4 Demand Rationalization

A review of the existing and background intersection operations has been conducted to determine if/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*, the target vehicular level of service (Auto LOS) at all study area intersections is an Auto LOS D, which equates to a maximum vehicle-to-capacity (v/c) ratio of 0.90. Signal timing plans have been obtained from the City, and are included in **Appendix H**.

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 8** and **Table 9** for the weekday AM and PM peak hours. Detailed Synchro reports are included in **Appendix I**.

	AM Peak Hour				PM Peak Hour			
Intersection	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt		
Innes Road/	1.19	F	SBR	1.00	E	EBT		
Orléans Boulevard ⁽¹⁾	0.91	E	EBL	1.00				
Innes Road/ Pagé Road ⁽¹⁾	0.55	А	WBT/R	0.72	С	WBL		
Innes Road/ Lamarche Avenue ⁽²⁾	14 sec	В	NBL/R	27 sec	D	NBL/R		
Innes Road/ 473m East of Pagé Road ⁽¹⁾	0.46	A	WBT/R	0.59	A	EBT/R		

Table 8: Existing Traffic Operations

1. Signalized intersection

2. Unsignalized intersection

Table 9: Existing Queues

	Storage/			AM Peak		PM Peak			
Intersection	Mvmt	Spacing ⁽¹⁾	v/c	50 th %	95 th %	v/c	50 th %	95 th %	
			[LOS]	Queue (m)	Queue (m)	[LOS]	Queue (m)	Queue (m)	
	SBL	50m	0.38 [A]	16	30	0.79 [C]	34	#63	
Innee Deed/	SBR	60m	1.19 [F]	~115	#177	0.45 [A]	0	17	
Orléans Roulovard	EBL	140m	0.91 [E]	17	#35	0.90 [D]	64	#91	
Orleans Boulevard	EBT	820m	0.25 [A]	29	40	1.00 [E]	~195	#235	
	WBT	450m	0.88 [D]	148	178	0.60 [A]	45	82	

1: Indicates the storage length for auxiliary lanes or the spacing to the nearest upstream intersection/access for through lanes

#: Volume for the 95th percentile cycle exceeds capacity

~: Approach is above capacity

From the previous tables, there are several movements at Innes Road/Orléans Boulevard that exceed the target v/c ratio during the weekday peak hours. During the AM peak hour, the average (50th-percentile) and maximum (95th-percentile) queue lengths of the southbound right turn movement exceed the storage length provided. During the PM peak hour, the maximum queue length of the southbound left turn movement at Innes Road/Orléans Boulevard exceeds the storage length provided.

The approximate required reduction in volumes to meet the target Auto LOS D for each overcapacity movement is included below. Detailed Synchro reports of an alternative scenario with these reduced volumes is included in **Appendix I**.

Innes Road/Orléans Boulevard

- AM Peak Hour
 - Southbound right turn (v/c: 1.19): reduction of 140 vehicles required;
 - Eastbound left turn (v/c: 0.91): reduction of 10 vehicles required.
- PM Peak Hour
 - Eastbound through (v/c: 1.00): reduction of 140 vehicles required.

3.4.2 2025 Background Intersection Operations

Intersection capacity analysis has been conducted for the 2025 background traffic conditions. Signalization of the Innes Road/Lamarche Avenue intersection is anticipated to be in place by the buildout year 2025. This intersection has therefore been modelled as a signal, with auxiliary eastbound right turn, westbound left turn, northbound left turn, and northbound right turn lanes, as shown in Figure 5.

The results of the analysis are summarized in **Table 10** and **Table 11** for the weekday AM and PM peak hours. Detailed Synchro reports are included in Appendix J.

	Α	M Peak Ho	ur	PM Peak Hour			
Intersection	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt	
Innes Road/	1.10	F	SBR	1 1 2	E	EBT	
Orléans Boulevard ⁽¹⁾	0.98	E	WBT	1.12	Г		
Innes Road/ Pagé Road ⁽¹⁾	0.62	В	WBT/R	0.92	Е	WBL	
Innes Road/ Lamarche Avenue ⁽¹⁾	0.70	В	NBL	0.70	В	EBT	
Innes Road/ 473m East of Pagé Road ⁽¹⁾	0.56	A	NBL	0.70	В	EBT/R	

Table 10: 2025 Background Traffic Operations

1. Signalized intersection

2. Unsignalized intersection

Table 11: 2025 Ba	ckgrou	ind Queues							
		Storage/ Spacing ⁽¹⁾		AM Peak		PM Peak			
Intersection	Mvmt		v/c [LOS]	50 th % Queue (m)	95 th % Queue (m)	v/c [LOS]	50 th % Queue (m)	95 th % Queue (m)	
	SBL	50m	0.39 [A]	17	31	0.84 [D]	37	#69	
Innee Deed/	SBR	60m	1.10 [F]	~96	#157	0.42 [A]	0	14	
Innes Road/ Orléans Boulevard	EBL	140m	0.85 [D]	15	#32	0.86 [D]	58	#80	
	EBT	820m	0.29 [A]	36	47	1.12 [F]	~234	#274	
	WBT	450m	0.98 [E]	179	#228	0.75 [C]	63	#112	

able 11: 2025 Background Queues

1: Indicates the storage length for auxiliary lanes or the spacing to the nearest upstream intersection/access for through lanes

#: Volume for the 95th percentile cycle exceeds capacity

~: Approach is above capacity

From the previous tables, there are multiple movements within the study area that are not anticipated to meet the target Auto LOS D.

During the AM peak hour, the southbound right turn (v/c: 1.10) and westbound through (v/c: 0.98) at Innes Road/Orléans Boulevard operate at an Auto LOS E or F. The average and maximum queue lengths of the southbound right turn movement exceed the storage length provided.

During the PM peak hour, the eastbound through (v/c: 1.12) at Innes Road/Orléans Boulevard and westbound left turn (v/c: 0.92) at Innes Road/Pagé Road operates at an Auto LOS E or F. The maximum queue length of the southbound left turn movement at Innes Road/Orléans Boulevard exceeds the storage length provided.

An alternate scenario with optimized signal timings at Innes Road/Orléans Boulevard during the AM peak hour, and optimized signal timings and offsets at all study area intersections during the PM peak hour has been generated for the 2025 background conditions.

During the AM peak hour, seven seconds of green time for the northbound/southbound phases have been reallocated to the eastbound/westbound through phases at Innes Road/Orléans Boulevard.

During the PM peak hour, the cycle length of all study area intersections has been increased from 110 seconds to 130 seconds. At Innes Road/Orléans Boulevard, three seconds have been added to the northbound/southbound phases and 17 seconds have been added to the eastbound/ westbound phases. At all other intersections, 20 seconds have been added to the eastbound/ westbound phases. It is noted that the increased cycle length will result in delays of up to 20 seconds for pedestrians crossing Innes Road Within the study area. To mitigate the failing westbound left turn movement at Innes Road/Pagé Road in the PM peak hour, the alternate scenario also includes protected plus permitted westbound left turn phasing at this intersection. The westbound left turn improves to an Auto LOS A, while the opposing eastbound through/right turn movement downgrades from an Auto LOS C (v/c: 0.75) to an Auto LOS D (v/c: 0.82). It is understood that this type of phasing is typically implemented after the City reviews the actual performance of the intersections being studied.

In this scenario, there is still a required reduction in volumes to meet the target Auto LOS D. The required reduction for each over-capacity movement at Innes Road/Orléans Boulevard is included below. Detailed Synchro reports of this alternate scenario is included in **Appendix J**.

Innes Road/Orléans Boulevard

- AM Peak Hour
 - Southbound right turn (v/c: 1.10): reduction of 130 vehicles required.
- PM Peak Hour
 - Eastbound through (v/c: 1.12): reduction of 150 vehicles required.

3.4.3 2030 Background Intersection Operations

Intersection capacity analysis has been conducted for the 2030 background traffic conditions. The adjusted signal timings and offsets as described in the previous section have been assumed for this scenario. The results of the analysis are summarized in **Table 12** and **Table 13** for the weekday AM and PM peak hours. Detailed Synchro reports are included in **Appendix J**.

Interestion	Α	M Peak Ho	ur	PM Peak Hour			
Intersection	Max v/c	LOS	Mvmt	Max v/c	LOS	Mvmt	
Innes Road/	1.20	F	SBR	1.09	F	EBT	
Orléans Boulevard ⁽¹⁾	0.94	ш	WBT	0.95	E	SBL	
Innes Road/ Pagé Road ⁽¹⁾	0.67	В	WBT/R	0.88	D	EBT/R	
Innes Road/ Lamarche Avenue ⁽¹⁾	0.75	С	NBL	1.81	F	WBL	
Innes Road/ 473m East of Pagé Road ⁽¹⁾	0.60	A	WBT/R	0.76	С	EBT/R	

Table 12: 2030 Background Traffic Operations

1. Signalized intersection

		Storage		AM Peak		PM Peak			
Intersection	Mvmt	Spacing ⁽¹⁾	v/c	50 th %	95 th % Queue (m)	v/c [] 05]	50 th %	95 th %	
	SBL	50m	0.48 [A]	20	37	0.95 [E]	52	#98	
Innes Road/ Orléans Boulevard	SBR	60m	1.20 [F]	~115	#176	0.44 [A]	0	19	
	EBL	140m	0.89 [D]	16	#34	0.90 [D]	74	#101	
	EBT	820m	0.31 [A]	38	49	1.09 [F]	~266	#304	
	WBT	450m	0.94 [E]	182	#233	0.73 [C]	88	114	
Innes Road/	EBT	450m	0.27 [A]	14	39	0.88 [D]	34	m33	
Pagé Road	WBL	100m	0.08 [A]	1	m2	0.65 [B]	9	m#33	
Innes Road/	EBT	210m	0.28 [A]	30	21	0.75 [C]	16	12	
Lamarche Avenue	WBL	90m	0.43 [A]	21	25	1.81 [F]	~63	#106	
Innes Road/473m	EBT	210m	0.27 [A]	14	23	0.76 [C]	29	36	
East of Pagé Road	WBL	40m	0.02 [A]	1	3	0.68 [B]	6	#39	

Table 13: 2030 Background Queues

1: Indicates the storage length for auxiliary lanes or the spacing to the nearest upstream intersection/access for through lanes

m: Volume for the 95th percentile queue is metered by an upstream signal

#: Volume for the $95^{\mbox{\tiny th}}$ percentile cycle exceeds capacity

~: Approach is above capacity

From the previous tables, there are multiple movements within the study area that are not anticipated to meet the target Auto LOS D.

During the AM peak hour, the southbound right turn (v/c: 1.20) and westbound through (v/c: 0.94) at Innes Road/Orléans Boulevard operate at an Auto LOS E or F. The average and maximum queue lengths of the southbound right turn movement exceed the storage length provided.

During the PM peak hour, the southbound left turn (v/c: 0.95) and eastbound through (v/c: 1.09) at Innes Road/Orléans Boulevard, and the westbound left turn (v/c: 1.81) at Innes Road/Lamarche Avenue operate at an Auto LOS E or F. The maximum queue lengths of the southbound left turn movement at Innes Road/Orléans Boulevard and the westbound left turn movement at Innes Road/ Lamarche Avenue exceeds the storage lengths provided.

To mitigate failing westbound left turn movements at Innes Road/Lamarche Avenue in the PM peak hour, an alternate scenario with protected plus permitted left turn phasing has been conducted. At Innes Road/Lamarche Avenue, the westbound left turn improves to an Auto LOS D (v/c: 0.82), while the opposing eastbound through movement downgrades from an Auto LOS C (v/c: 0.75) to an Auto LOS E (v/c: 0.99). It is understood that this type of phasing is typically implemented after the City reviews the actual performance of the intersections being studied. Detailed Synchro reports of this alternate scenario is included in **Appendix J**.

The approximate required reduction in volumes to meet the target Auto LOS D for each overcapacity movement is included below.

Innes Road/Orléans Boulevard

- AM Peak Hour
 - Southbound right turn (v/c: 1.20): reduction of 150 vehicles required;
 - Westbound through (v/c: 0.94): reduction of 30 vehicles required.
- PM Peak Hour
 - Southbound left turn (v/c: 0.95): reduction of 30 vehicles required;
 - Eastbound through (v/c: 1.09): reduction of 280 vehicles required.

Innes Road/Lamarche Avenue (protected plus permitted westbound left turn phasing)

- PM Peak Hour
 - Eastbound through (v/c: 0.99): reduction of 140 vehicles required.

Detailed Synchro reports of an alternative scenario with these reduced volumes is also included in **Appendix J**.

Traffic throughout the study area could be displaced or alleviated through a combination of increased use of non-auto modes of transportation, alternate times of travel for drivers using the study area to make use of off-peak capacity, and alternate routes of travel. Further descriptions of these options are described below.

Increased Use of Non-Auto Modes

As discussed in Section 2.2.1, future improvements to the transit, cyclist, and pedestrian networks are anticipated within proximity of the study area. These improvements will include transit priority measures on Innes Road, Brian Coburn Boulevard, and the Blackburn Hamlet Bypass, the future Cumberland Transitway, and improved cyclist and pedestrian connectivity north of 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 Travel Routes

As congestion increases within the study area, some motorists may choose alternate routes of travel outside of the study area. North-south routes that are alternative to Orléans Boulevard include Mer Bleue Road/Jeanne d'Arc Boulevard, Tenth Line Road, and Trim Road. East-west routes that are alternative to Innes Road include Ottawa Road 174, St. Joseph Boulevard, and Brian Coburn Boulevard.

4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

Pedestrian walkways will connect the front of each proposed building to the existing sidewalk on the north side of Innes Road. These pathways will be approximately 2.5m in width.

Bicycle parking is proposed adjacent to the accessible parking spaces in front of each proposed building. A total of eight bicycle parking spaces are proposed on-site. A review of the parking requirements per the City's *Zoning By-Law* (ZBL) is included in Section 4.2.

The nearest bus stops to the subject site are discussed in Section 2.1.5. OC Transpo's service design guidelines for peak period service is to provide service within a five-minute (400m) walk of home, work, or school, for 95% of urban residents. The main entrances to each proposed building will be within 400m of stops on Innes Road that are served by OC Route 25.

A review of the City's *Transportation Demand Management (TDM)-Supportive Development Design* and *Infrastructure Checklist* has been conducted. Any required TDM-supportive design and infrastructure measures in the TDM checklist for non-residential developments have been met. A copy of this checklist is included in **Appendix K**. In addition to the required measures, the proposed development also meets the following 'basic' or 'better' measures as defined in the *TDM-Supportive Development Design and Infrastructure Checklist*.

- Locate buildings close to the street, and do not locate parking areas between the street and building entrances;
- Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations;
- Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort;
- Provide safe, direct, and attractive walking routes from building entrances to nearby transit stops;
- Provide lighting, landscaping, and benches along walking and cycling routes between building entrances and streets, sidewalks, and trails.

4.1.2 Circulation and Access

Garbage collection will take place at the northeast corner of Building A and northwest corner of Building B. Loading and deliveries will occur at the back of each proposed building (i.e. at the northern end of the subject site). It has been estimated that a Medium Single Unit (MSU) design vehicle will be the largest vehicle to traverse the site. Therefore, truck turning movements for an MSU design vehicle have been prepared to enter and exit the site and each loading zone. The turning movement figures are included in **Figure 16** through **Figure 19**.

The fire route for the subject site will be located along Innes Road.

4.2 Parking

The subject site is located in Area C of Schedule 1 and Schedule 1A of the City's ZBL. Minimum vehicle parking rates, accessible parking rates, bicycle parking rates, and loading space rates for the proposed development are identified in Sections 101, 111, and 113 of the ZBL, and the City's *Accessibility Design Standards*. The results of this parking review are summarized in **Table 14**.

Land Use	Rate	Units	Required	Provided
Minimum Vehi	cle Parking			
Retail Store	3.4 spaces per 100 m ² GFA	1,647 m ²	56	69
Minimum Acce	essible Parking			
-	3 spaces required when 51 to 75 spaces are provided	69 spaces	3	4
Minimum Bicyc	cle Parking			
Retail Store	1.0 spaces per 250 m ² GFA	1,647 m ²	7	8
Minimum Load	ling Spaces			
Retail Store	0 spaces required when total GFA is 1,000 to 1,999 m ²	1,647 m ²	0	2

Table 14: Required and Proposed Parking

Based on the previous table, the minimum parking/loading requirements will be met.









4.3 Boundary Streets

This section provides a review of the boundary street Innes Road, using complete streets principles. The *MMLOS Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation, based on existing conditions. Innes Road has been evaluated based on the targets associated with an 'Arterial Mainstreet' (as Innes Road is designated as such on Schedule B of the City's previous Official Plan, which is referenced by the *MMLOS Guidelines*).

A detailed segment MMLOS review of Innes Road is included in **Appendix L**. A summary of the segment MMLOS analysis is provided below in **Table 15**.

Table 15: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Innes Road	D	С	E	В	D	D	A	D

Innes Road does not meet the target pedestrian level of service (PLOS) or bicycle level of service (BLOS).

Both sides of Innes Road currently include a 2.0m sidewalk with a boulevard width of approximately 3.5m. Per Exhibit 4 of the *MMLOS Guidelines*, the target PLOS C cannot be achieved on this segment on Innes Road without reducing the operating speed. Therefore, the best-possible PLOS D is achieved.

Both directions of Innes Road currently include curbside bike lanes with an approximate width of 2.0m. Based on Exhibit 11 of the *MMLOS Guidelines*, a physically separated bikeway (such as cycle tracks or multi-use pathways) are required to achieve the target BLOS B for Innes Road, given the current operating speed. The *Ontario Traffic Manual (OTM) – Book 18* includes a desirable cycling facility pre-selection tool, based on the operating speed and AADT of a roadway. For roadways with an operating speed of 70 km/h and AADT volumes greater than 10,000 vehicles per day, OTM Book 18 identifies that separated facilities are appropriate. This is identified for the City's consideration. The pre-selection tool is included in **Figure 20**.

4.4 Access Intersections

The proposed development includes one access to Innes Road. The access has been evaluated based on the relevant provisions of the City's *Private Approach By-Law* (PABL) and the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*. Based on the planned Innes Road/Lamarche Avenue signal and raised median, the access would be restricted to RIRO. City staff have confirmed that a median break and eastbound left turn lane at the proposed access can be considered, and therefore this section also includes a justification for a median break that maintains the inbound left turn movement but restricts the outbound left turn movement.

Private Approach By-Law

Section 25(a) of the PABL identifies that a maximum of two two-way private approaches can be provided for a site with 46m to 150m of frontage to a given roadway. Therefore, the single proposed access meets this requirement.



Figure 20: Desirable Cycling Facility Pre-Selection Nomograph

Average Daily Traffic Volume (Thousands)

- 1 Operating speeds are assumed to be similar to posted speeds. If evidence suggests this is not the case, practitioners may consider using 85th percentile speeds or implementing measures to reduce operating speeds.
- 2 Physically separated bikeways may always be considered in the designated operating space area of the nomograph.
- 3 On roadways with two or more lanes per direction (including multi-lane one-way roadways), a buffered bicycle lane should be considered the minimum with a typical facility being a physically separated bikeway.

Section 25(c) of the PABL identifies a maximum width of 9m for any two-way private approach, as measured at the street line. The proposed access is approximately 8.3m at the future widened ROW for Innes Road. Therefore, this requirement is met.

Section 25(m)(i) of the PABL identifies a minimum distance between the nearest edge of a private approach and the nearest intersecting street line, based on the land use and number of parking spaces proposed. Since the proposed development includes a parking lot for the use of customers of a retail or wholesale business, and the total number of parking spaces falls between 50 and 99, this section identifies a minimum distance of 30m between the private approach and the nearest intersecting street line. Since the proposed access is approximately 60m west of the Lamarche Avenue ROW and 135m east of the Pagé Road ROW, this requirement is met.

Section 25(p) of the PABL identifies a minimum distance of 3m between the nearest edge of a private approach and the property line. Since the proposed access is approximately 42m from the eastern property limit and approximately 40m from the western property limit, this requirement is met.

Section 25(u) of the PABL identifies a requirement that any private approach serving a parking area with more than 50 parking spaces shall not have a grade exceeding 2% for the first 9m inside the property line. The proposed access has a maximum grade of 2.8% for the first 9m (descending towards the roadway), which marginally exceeds the requirement. It is anticipated that drivers exiting the subject site will still have adequate sightlines to pedestrians walking along Innes Road. Therefore, it is requested that the requirement of Section 25(u) of the PABL be waived.

Geometric Design Guide for Canadian Roads

For commercial developments that are less than 25,000 m² in size, TAC's *Geometric Design Guide* identifies a minimum clear throat length requirement of 15m for any access to an arterial roadway. This requirement is met by the proposed access.

TAC's *Geometric Design Guide* also identifies a minimum corner clearance of 70m between a driveway and a signalized intersection, measuring from the nearest edge of a private approach and the nearest edge of the intersecting street. The western edge of the proposed access is approximately 140m from the nearest edge of Pagé Road, meeting this requirement. The eastern edge of the proposed access is approximately 68m from the nearest edge of Lamarche Avenue, which is marginally short of the requirement. Locating the proposed access within 70m of Lamarche Avenue can be justified, as the access will only be downstream of Lamarche Avenue and the proposed development is not anticipated to generate queues backing onto Innes Road at the access.

Based on the above, the proposed access meets the clear throat requirement outlined in TAC's *Geometric Design Guide* and all relevant provisions of the City's PABL, except for Section 25(u).

Proposed Median Break at Access

The planned signalization of Innes Road/Lamarche Avenue, which would include a raised median on Innes Road between Pagé Road and Lamarche Avenue, would restrict access to the proposed development to RIRO. Passenger car trips arriving to the site from the west and departing to the east would then be required to perform U-turn manoeuvres on Innes Road at Pagé Road and Lamarche Avenue. Larger vehicles, such as delivery or garbage trucks arriving to the subject site, will be unable to perform an eastbound U-turn at Innes Road/Lamarche Avenue, and would therefore be required to either make an eastbound right turn onto Lamarche Avenue and turn around within the Orléans Village subdivision, or do a large loop 'around the block' using the arterial road network and come back to the site via the neighbourhood collectors. Therefore, it is proposed that a median break is provided at the proposed access to Innes Road, which would permit eastbound left turns, but restrict outbound left turns from the proposed development. This median break would include an auxiliary eastbound left turn lane. The Ministry of Transportation of Ontario (MTO)'s supplement to the *Geometric Design Guide* includes a left turn lane storage graph for four-lane divided highways, which identifies that a turn lane is warranted, and falls 'on-the-line' between 15m and 25m. Per comments from City staff, a 20m eastbound left turn lane with a 55m taper is recommended. A copy of the MTO left turn lane storage graph is included in **Appendix M**.

The RMA for the signal and raised median related to the 270 Lamarche Avenue application includes a westbound left turn lane at Innes Road/Pagé Road with 90m of storage. Implementing the proposed median break and auxiliary eastbound left turn lane will require a reduction of the westbound left turn storage at Innes Road/Pagé Road from 90m to approximately 50m.

Based on the 2030 total traffic analysis included in Section 4.6.3, the reduced storage length is still anticipated to accommodate the 95th-percentile queue lengths for this movement during the peak hours. TAC's *Geometric Design Guide* includes a storage length equation for signalized intersections (S = 1.5 * N * L / [3600 / CL], where S is storage length, N is number of vehicles during the peak hour, L is an assumed vehicle length of 7m, and CL is the cycle length in seconds). The equation recommends a storage length of 40m for the westbound left turn lane at Innes Road/Pagé Road, and therefore reducing the westbound left turn storage from 90m to 50m will maintain a sufficient storage length.

A functional design of the proposed median break is included in **Appendix N**. The appendix also includes a turning movement for an MSU and passenger vehicle making an eastbound left turn into the site.

4.5 Transit

Based on the trip generation estimates presented in Section 3.1.1, the proposed development is projected to generate two transit trips during the AM peak hour and four transit trips during the PM peak hour. No capacity issues are anticipated for OC Routes 25, 131, or 231, based on transit trips generated by the proposed development.

4.6 Intersection Design

4.6.1 Intersection MMLOS Review

This section provides a review of the existing signalized study area intersections, using complete streets principles. The MMLOS targets associated with the 'General Urban Area' have been used to evaluate Innes Road/Orléans Boulevard, and the MMLOS targets associated with the 'Arterial Mainstreet' have been used to evaluate Innes Road/Pagé Road and Innes Road/473m East of Pagé Road. All intersections have been evaluated based on existing conditions.

The full intersection MMLOS analysis is included in **Appendix L**. A summary of the results is shown in **Table 16**.

Table 16: Intersection MMLOS Summary

Intersection	PLOS		BLOS		TLOS		TkLOS	
Intersection	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Innes Road/Orléans Boulevard	F		F		F		Α	
Innes Road/Pagé Road	F	С	F	В	С	D	Е	D
Innes Road/473m East of Pagé Road	F		F		В		F	

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

- No signalized intersections meet the target PLOS;
- No signalized intersections meet the target BLOS;
- Innes Road/Pagé Road and Innes Road/473m East of Pagé Road meet the target TLOS, while Innes Road/Orléans Boulevard does not;
- Innes Road/Orléans Boulevard meets the target TkLOS, while Innes Road/Pagé Road and Innes Road/473m East of Pagé Road does not.

Innes Road/Orléans Boulevard

This intersection does not meet the target PLOS C, BLOS B, or TLOS D.

All approaches have a divided cross-section with a width equivalent to ten lanes crossed or more (assuming a lane width equals 3.5m, per the *MMLOS Guidelines*). There is limited opportunity in improving any approach to the target PLOS C without reducing the number of travel lanes or restricting turning movements. All approaches meet the City's vehicle/pedestrian conflict threshold for zebra-striped crosswalks (greater than 400,000 vehicle/pedestrian conflicts over an eight-hour period), and the east and west approaches have had zebra-striped crosswalks implemented. There is limited opportunity in improving the delay score for pedestrians crossing at the east and west approaches, without incurring major delays for vehicles.

All approaches do not achieve the target BLOS B, based on both left turn and right turn characteristics. To achieve this target, a protected intersection would be required, and would involve the removal of all right turn channels. This is identified for the City's consideration.

All approaches do not achieve the target TLOS D. It is anticipated that transit delays will improve once the isolated transit priority measures described in Section 2.2.1 are implemented.

Innes Road/Pagé Road

This intersection does not meet the target PLOS C, BLOS B, or TkLOS D.

All approaches have a cross-section with a width equivalent to six lanes crossed or more. There is limited opportunity in improving any approach to the target PLOS C. The east and west approaches meet the City's vehicle/pedestrian conflict threshold for zebra-striped crosswalks, which could be considered to improve the level of comfort for pedestrians. There is limited opportunity in improving the delay score for pedestrians crossing at the east and west approaches, without incurring major delays for vehicles.

The east and west approaches do not achieve the target BLOS B, based on left turn characteristics. Per Exhibit 12 of the *MMLOS Guidelines*, two-stage left-turn bike boxes would be required to achieve the target, and would therefore require a restriction to right turns on red (RTOR) for northbound and southbound vehicles. It is recommended that if bike boxes are pursued, that they are implemented holistically along the Innes Road where applicable, rather than at only select intersections.

The east and west approaches do not achieve the target TkLOS D. Given that Pagé Road is primarily a residential street, and the volume of heavy vehicles turning onto Pagé Road is anticipated to be low, no modifications to the curb radii are recommended.

Innes Road/473m East of Pagé Road

This intersection does not meet the target PLOS C, BLOS B, or TkLOS D.

The south, east, and west approaches have a cross-section with a width equivalent to six lanes crossed or more. There is limited opportunity in improving these approaches to the target PLOS C. The north approach could be improved to the target PLOS C by reducing the width from an equivalent of four lanes crossed to three. No other modifications are identified.

The south, east, and west approaches do not achieve the target BLOS B, based on left turn characteristics. Per Exhibit 12 of the *MMLOS Guidelines*, two-stage left-turn bike boxes would be required to achieve the target, and would therefore require RTOR restrictions for northbound, southbound, and westbound vehicles. It is recommended that if bike boxes are pursued, that they are implemented holistically along the Innes Road where applicable, rather than at select intersections.

The east approach does not achieve the target TkLOS D. Given the layout and size of the commercial site at 3615 Innes Road, it is anticipated that large trucks do not enter and exit the site for loading and deliveries. Therefore, no modifications are recommended.

4.6.2 2025 Total Intersection Operations

Intersection capacity analysis has been conducted for the 2025 total traffic conditions. The optimized signal timings, phasing, and offsets as described in Section 3.4.2 has been assumed for this scenario.

The results of the analysis are summarized in **Table 17** and **Table 18** for the weekday AM and PM peak hours. Detailed Synchro reports are included in **Appendix O**.

Table 17: 2025 Total Traffic Operations

	A	M Peak Ho	ur	PM Peak Hour			
Intersection	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt	
Innes Road/ Orléans Boulevard ⁽¹⁾	1.15	F	SBR	0.99	Е	EBT	
Innes Road/ Pagé Road ⁽¹⁾	0.63	В	WBT/R	0.83	D	EBT/R	
Innes Road/ Lamarche Avenue ⁽¹⁾	0.70	В	NBL	0.70	В	EBT	
Innes Road/ 473m East of Pagé Road ⁽¹⁾	0.56	А	NBL	0.71	С	EBT/R	
Innes Road/ Site Access ⁽²⁾	13 sec	В	EBL	11 sec	В	SBR	

1. Signalized intersection

2. Unsignalized intersection

Table 18: 2025 Total Queues

	Storage/			AM Peak		PM Peak			
Intersection	Mvmt	Spacing ⁽¹⁾	v/c II OSI	50 th % Queue (m)	95 th % Queue (m)	v/c II OS1	50 th % Queue (m)	95 th % Queue (m)	
	SBL	50m	0.41 [A]	17	32	0.90 [D]	46	#85	
Innee Deed/	SBR	60m	1.15 [F]	~103	#164	0.44 [A]	0	19	
Orléans Roulovard	EBL	140m	0.85 [D]	15	#32	0.88 [D]	70	#91	
Orleans Boulevard	EBT	820m	0.27 [A]	32	43	0.99 [E]	~234	#273	
	WBT	450m	0.88 [D]	160	192	0.64 [B]	78	106	

1: Indicates the storage length for auxiliary lanes or the spacing to the nearest upstream intersection/access for through lanes m: Volume for the 95th percentile queue is metered by an upstream signal

#: Volume for the 95th percentile cycle exceeds capacity

~: Approach is above capacity

Compared to the 2025 background conditions, the addition of site-generated traffic is anticipated to have a marginal impact to peak hour traffic operations within the study area. The maximum westbound through queue lengths at Innes Road/Pagé Road are approximately 13m in the AM peak hour and 26m in the PM peak hour, and therefore do not extend upstream to the proposed site access.

4.6.3 2030 Total Intersection Operations

Intersection capacity analysis has been conducted for the 2030 total traffic conditions. The optimized signal timings, phasing, and offsets as described in Section 3.4.3 has been assumed for this scenario.

The results of the analysis are summarized in **Table 19** and **Table 20** for the weekday AM and PM peak hours. Detailed Synchro reports are included in **Appendix O**.

Table 19: 2030 Total Traffic Operations

Interportion	A	M Peak Ho	ur	PM Peak Hour		
intersection	Max v/c	LOS	Mvmt	Max v/c	LOS	Mvmt
Innes Road/	1.20	F	SBR	1.09	F	EBT
Orléans Boulevard ⁽¹⁾	0.94	ш	WBT	0.95	E	SBL
Innes Road/ Pagé Road ⁽¹⁾	0.68	В	WBT/R	0.89	D	EBT/R
Innes Road/ Lamarche Avenue ⁽¹⁾	0.75	С	NBL	0.99	Е	EBT
Innes Road/ 473m East of Pagé Road ⁽¹⁾	0.60	A	WBT/R	0.76	С	EBT/R
Innes Road/ Site Access ⁽²⁾	13 sec	В	EBL	11 sec	В	EBL

1. Signalized intersection

2. Unsignalized intersection

Table 20: 2030 Total Queues

	Mvmt Storage/ Spacing ⁽¹	Storage/	AM Peak			PM Peak		
Intersection		Spacing ⁽¹⁾	v/c [LOS]	50 th % Queue (m)	95 th % Queue (m)	v/c [LOS]	50 th % Queue (m)	95 th % Queue (m)
Innes Road/ Orléans Boulevard	SBL	50m	0.49 [A]	21	38	0.95 [E]	53	#99
	SBR	60m	1.20 [F]	~115	#176	0.44 [A]	0	19
	EBL	140m	0.89 [D]	16	#34	0.90 [D]	74	#101
	EBT	820m	0.31 [A]	38	50	1.09 [F]	~267	#306
	WBT	450m	0.94 [E]	183	#234	0.74 [C]	85	114
Innes Road/ Pagé Road	EBT	450m	0.28 [A]	14	40	0.89 [D]	35	m33
	WBL	50m	0.08 [A]	1	m1	0.68 [B]	9	m#39
Innes Road/ Lamarche Avenue	EBT	210m	0.29 [A]	30	21	0.99 [E]	114	#241
	WBL	90m	0.43 [A]	21	22	0.83 [D]	29	#72
Innes Road/473m East of Pagé Road	EBT	210m	0.27 [A]	8	16	0.76 [C]	16	30
	WBL	40m	0.02 [A]	1	3	0.68 [B]	6	#39

1: Indicates the storage length for auxiliary lanes or the spacing to the nearest upstream intersection/access for through lanes

m: Volume for the 95th percentile queue is metered by an upstream signal #: Volume for the 95th percentile cycle exceeds capacity

~: Approach is above capacity

Compared to the 2030 background conditions, the addition of site-generated traffic is anticipated to have a marginal impact to peak hour traffic operations within the study area. The maximum westbound through queue lengths at Innes Road/Pagé Road are approximately 13m in the AM peak hour and 27m in the PM peak hour, and therefore do not extend upstream to the proposed site access. The maximum eastbound through queue length at Innes Road/Lamarche Avenue is approximately 241m, and therefore extends upstream through the Innes Road/Pagé Road intersection during the PM peak hour.

The maximum westbound left turn queue lengths at Innes Road/Pagé Road are approximately 1m in the AM peak hour and 38m in the PM peak hour. Reducing the storage length of the westbound left turn lane to 50m therefore accommodates the maximum westbound left turn queue lengths during the peak hours.

The maximum eastbound left turn queue lengths at the proposed site access are less than 1m during the peak hours. Therefore, the proposed storage length of 20m is sufficient.

5.0 CONCLUSIONS AND RECOMMENDATIONS

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

Roadway Modifications to Innes Road/Lamarche Avenue

- Signalization of the Innes Road/Lamarche Avenue intersection is anticipated to be in place by the buildout year 2025, per discussions with City staff. The functional design of the roadway modifications at Innes Road/Lamarche Avenue includes auxiliary eastbound right turn, westbound left turn, northbound left turn, and northbound right turn lanes.
- The planned signalization of Innes Road/Lamarche Avenue, which would include a raised median on Innes Road between Pagé Road and Lamarche Avenue, would restrict access to the proposed development to right-in/right-out (RIRO). Passenger car trips arriving to the site from the west and departing to the east would then be required to perform U-turn manoeuvres on Innes Road at Pagé Road and Lamarche Avenue. Larger vehicles will be unable to perform an eastbound U-turn at Innes Road/Lamarche Avenue, and would therefore be required to either make an eastbound right turn onto Lamarche Avenue and turn around within the Orléans Village subdivision, or do a large loop 'around the block' using the arterial road network and come back to the site via the neighbourhood collectors.
- It is proposed that a median break is provided at the proposed access to Innes Road, which would permit eastbound left turns, but restrict outbound left turns from the proposed development. This median break would include an auxiliary eastbound left turn lane, with 20m of storage length and a 55m taper. The maximum eastbound left turn queue lengths at the proposed site access are less than 1m during the peak hours. Therefore, the proposed storage length of 20m is sufficient.
- The signal and raised median related to the 270 Lamarche Avenue application includes a
 westbound left turn lane at Innes Road/Pagé Road with 90m of storage. Implementing the
 proposed median break and auxiliary eastbound left turn lane will require a reduction of the
 westbound left turn storage at Innes Road/Pagé Road from 90m to approximately 50m. The
 reduced storage length is still anticipated to accommodate the 95th-percentile queue lengths
 for this movement during the peak hours.
- The Transportation Association of Canada (TAC)'s Geometric Design Guide for Canadian Roads includes a storage length equation for signalized intersections. The equation recommends a storage length of 40m for the westbound left turn lane at Innes Road/Pagé Road, and therefore reducing the westbound left turn storage from 90m to 50m will maintain a sufficient storage length.

Forecasting

• The proposed development is estimated to generate 31 person trips (including 23 vehicle trips) during the AM peak hour, and 80 person trips (including 60 vehicle trips) during the PM peak hour.

Development Design and Parking

 Pedestrian walkways will connect the front of each proposed building to the existing sidewalk on the north side of Innes Road. These pathways will be approximately 2.5m in width.

- Four bicycle parking spaces are proposed adjacent to the accessible parking spaces in front of each proposed building, for a total of eight bicycle parking spaces on-site.
- OC Transpo's service design guidelines for peak period service is to provide service within a five-minute (400m) walk of home, work, or school, for 95% of urban residents. The main entrances to each proposed building will be within 400m of stops on Innes Road that are served by OC Route 25.
- Any required Transportation Demand Management-supportive design and infrastructure measures in the TDM checklist for non-residential developments have been met.
- Garbage collection will take place at the northeast corner of Building A and northwest corner of Building B. Loading and deliveries will occur at the back of each proposed building (i.e. at the northern end of the subject site). The fire route for the subject site will be located along Innes Road.
- The minimum parking and loading requirements of the City's *Zoning By-Law* will be met.

Boundary Streets

- Innes Road does not meet the target pedestrian level of service (PLOS) or bicycle level of service (BLOS), and meets the target transit level of service (TLOS) and truck level of service (TkLOS).
- Both sides of Innes Road currently include a 2.0m sidewalk with a boulevard width of approximately 3.5m. The best-possible PLOS D is achieved.
- Both directions of Innes Road currently include curbside bike lanes with an approximate width of 2.0m. For roadways with an operating speed of 70 km/h and AADT volumes greater than 10,000 vehicles per day, the *Ontario Traffic Manual (OTM) Book 18* identifies that separated facilities are appropriate. This is identified for the City's consideration.

Access Design

- The proposed access meets all relevant provisions of the City's *Private Approach By-Law* (PABL) except for Section 25(u). A waiver to Section 25(u) of the PABL is requested.
- TAC's *Geometric Design Guide* identifies a minimum corner clearance of 70m between a driveway and a signalized intersection, measuring from the nearest edge of a private approach and the nearest edge of the intersecting street. The western edge of the proposed access is approximately 140m from the nearest edge of Pagé Road, meeting this requirement. The eastern edge of the proposed access is approximately 68m from the nearest edge of Lamarche Avenue, which is marginally short of the requirement. Locating the proposed access within 70m of Lamarche Avenue can be justified, as the access will only be downstream of Lamarche Avenue, and the proposed development is not anticipated to generate queues backing onto Innes Road at the access.

<u>Transit</u>

 The proposed development is projected to generate two transit trips during the AM peak hour and four transit trips during the PM peak hour. No capacity issues are anticipated for OC Routes 25, 131, or 231, based on transit trips generated by the proposed development.

Intersection MMLOS

- The results of the intersection MMLOS analysis can be summarized as follows:
 - No signalized intersections meet the target PLOS;
 - No signalized intersections meet the target BLOS;
 - Innes Road/Pagé Road and Innes Road/473m East of Pagé Road meet the target TLOS, while Innes Road/Orléans Boulevard does not;
 - Innes Road/Orléans Boulevard meets the target TkLOS, while Innes Road/Pagé Road and Innes Road/473m East of Pagé Road do not.
- For any approaches that do not meet the target PLOS, there is limited opportunity in improving any approach to the target without reducing the number of travel lanes or restricting turning movements. There is also limited opportunity in improving the delay score for pedestrians crossing Innes Road without incurring major delays for vehicles.
- All approaches of Innes Road/Orléans Boulevard do not achieve the target BLOS, based on both left turn and right turn characteristics. To achieve this target, a protected intersection would be required, and would involve the removal of all right turn channels. This is identified for the City's consideration.
- The east and west approaches at Innes Road/Pagé Road and the south, east, and west approaches at Innes Road/473m East of Pagé Road, do not meet the target BLOS based on left turn characteristics. Two-stage left-turn bike boxes would be required to achieve the target, and would therefore require restriction to right turns on red (RTOR). It is recommended that if bike boxes are pursued, that they are implemented holistically along the Innes Road where applicable, rather than at only select intersections.
- All approaches at Innes Road/Orléans Boulevard do not meet the target TLOS. It is anticipated that transit delays will improve once isolated transit priority measures are implemented on Innes Road.
- The east and west approaches at Innes Road/Pagé Road and the east approach at Innes Road/473m East of Pagé Road do not achieve the target TkLOS. No modifications to the curb radii are recommended, as Pagé Road is primarily a residential street with low truck volumes, and it is anticipated that large trucks do not enter and exit 3615 Innes Road for loading and deliveries, given the layout and size.

Existing Intersection Operations

- During the AM peak hour, the southbound right turn and eastbound left turn movements at Innes Road/Orléans Boulevard operate at a failing vehicular level of service. To meet the target, a reduction of approximately 140 southbound right turning vehicles and 10 eastbound left turning vehicles would be required. The average (50th-percentile) and maximum (95thpercentile) queue lengths of the southbound right turn movement at Innes Road/Orléans Boulevard exceed the storage length provided.
- During the PM peak hour, the eastbound through movement at Innes Road/Orléans Boulevard operate at a failing vehicular level of service. To meet the target, a reduction of approximately 100 eastbound through vehicles would be required. The maximum queue length of the southbound left turn movement at Innes Road/Orléans Boulevard exceeds the storage length provided.

Background Intersection Operations

- During the AM peak hour, the southbound right turn and westbound through movements at Innes Road/Orléans Boulevard operate at a failing vehicular level of service. To meet the target, a reduction of approximately 150 southbound right turning vehicles and 30 westbound through vehicles would be required. The average and maximum queue lengths of the southbound right turn movements exceed the storage length provided.
- During the PM peak hour, the southbound left turn and eastbound through movements at Innes Road/Orléans Boulevard, and the westbound left turn movements at Innes Road/ Pagé Road and Innes Road/Lamarche Avenue operate at a failing vehicular level of service. To meet the target, a reduction of approximately 30 southbound right turning vehicles and 280 eastbound through vehicles at Innes Road/Orléans Boulevard would be required. The maximum queue length of the southbound left turn movement at Innes Road/Orléans Boulevard exceeds the storage length provided.
- To mitigate failing movements at Innes Road/Orléans Boulevard, seven seconds of green time for the northbound/southbound phases have been reallocated to the eastbound/ westbound through phases in the AM peak hour. For the PM peak hour, the cycle length of all study area intersections has been increased from 110 to 130 seconds, with most or all of this additional green time added to the eastbound/westbound phases.
- To mitigate failing westbound left turn movements at Innes Road/Pagé Road and Innes Road/Lamarche Avenue in the PM peak hour, protected plus permitted left turn phasing is identified for the City's consideration. With this phasing, a reduction of approximately 140 eastbound through vehicles at Innes Road/Lamarche Avenue in the PM peak hour would be required to meet the target vehicular level of service. It is understood that this type of phasing is typically implemented after the City reviews the actual performance of the intersections being studied.

Total Intersection Operations

 The addition of site-generated traffic is anticipated to have a marginal impact to peak hour traffic operations within the study area. During the peak hours, the maximum westbound through queue lengths at Innes Road/Pagé Road do not extend upstream to the proposed site access. The maximum eastbound through queue at Innes Road/Lamarche Avenue extends upstream through the Innes Road/Pagé Road intersection during the PM peak hour.

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

NOVATECH

Prepared by:



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Reviewed by:



Jennifer Luong, P.Eng. Senior Project Manager | Transportation

APPENDIX A

Preliminary Site Plan





Lapensée Mattress

GROUND FLOOR

SCALE 1:500 JULY 12, 2023

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines TIA Screening

1. Description of Proposed Development

Municipal Address	3493-3499 Innes Road		
Description of Location	North side of Innes Road, 90m east of Page Road		
Land Use Classification	Destination retail		
Development Size (units)			
Development Size square metre (m ²)	1,647 sq.m. GFA		
Number of Accesses and Locations	One proposed access to Innes Road		
Phase of Development	2		
Buildout Year	2024 (Phase 1); 2025 (Phase 2)		

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.

Table notes:

- 1. Table 2, Table 3 & Table 4 TRANS Trip Generation Manual
- 2. Institute of Transportation Engineers (ITE) Trip Generation Manual 11.1 Ed.

Land Use Type	Minimum Development Size
Single-family homes	60 units
Multi-Use Family (Low-Rise) ¹	90 units
Multi-Use Family (High-Rise) ¹	150 units
Office ²	1,400 m ²
Industrial ²	7,000 m ²
Fast-food restaurant or coffee shop ²	110 m ²
Destination retail ²	1,800 m ²
Gas station or convenience market ²	90 m ²

If the proposed development size is equal to or 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 Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	v	
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)? ²	v	

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 kilometers per hour (km/h) or greater?		v
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		~
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 metre [m] of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	~	
Is the proposed driveway within auxiliary lanes of an intersection?		•
Does the proposed driveway make use of an existing median break that serves an existing site?		~

² Hubs are identified in Schedules B1 to B8 of the City of Ottawa Official Plan. PMTSAs are identified in Schedule C1 of the Official Plan. DPAs are identified in Schedule C7A and C7B of the Official. See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA.

Transportation Impact Assessment Guidelines

	Yes	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		~
Does the development include a drive-thru facility?		~

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

5. Summary		
Results of Screening	Yes	No
Does the development satisfy the Trip Generation Trigger?	~	
Does the development satisfy the Location Trigger?	v	
Does the development satisfy the Safety Trigger?	•	

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

OC Transpo Route Maps





Local

7 days a week / 7 jours par semaine All day service

Service toute la journée





Monday to Friday / Lundi au vendredi

Peak periods only Périodes de pointe seulement



2019.07












APPENDIX D

Traffic Count Data



Turning Movement Count - Peak Hour Diagram INNES RD @ ORLEANS BLVD



Comments



Turning Movement Count - Peak Hour Diagram INNES RD @ ORLEANS BLVD



Comments



Turning Movement Count - Peak Hour Diagram INNES RD @ PAGE RD





Turning Movement Count - Peak Hour Diagram INNES RD @ PAGE RD



Comments



Printed on: 8/9/2021

Prepared by: thetrafficspecialist@gmail.com

Flow Diagrams: AM PM Peak



Turning Movement Count - Peak Hour Diagram INNES RD @ 473 E OF PAGE RD/BUILDERS' WAREHOUS





Turning Movement Count - Peak Hour Diagram INNES RD @ 473 E OF PAGE RD/BUILDERS' WAREHOUS



APPENDIX E

Collision Records



Location: INNES	RD @ 473 E	OF PAGE RD/B	UILDERS' WAREHO	US					
Traffic Control: Tra	ffic signal						Total Collisions:	5	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2015-Jan-21, Wed,08:18	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	g Pick-up truck	Other motor vehicle	0
					West	Stopped	Passenger van	Other motor vehicle	
2016-Jun-30, Thu,06:35	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	g Motorcycle	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jul-05, Wed,15:30	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	g Pick-up truck	Other motor vehicle	
2018-Jan-02, Tue,11:15	Snow	SMV other	P.D. only	Ice	East	Making "U" turn	Automobile, station wagon	Snowbank/drift	0
2018-May-28, Mon,12:27	Clear	Angle	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
Location: INNES	RD @ ORLE	ANS BLVD							
Traffic Control: Tra	ffic signal						Total Collisions:	68	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2015-Jan-06, Tue,08:51	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	
2015-Jan-27, Tue,11:59	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Jan-31, Sat,14:30	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	
2015-May-03, Sun,17:07	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	g Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2015-May-22, Fri,16:27	Clear	Angle	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2015-Jan-27, Tue, 11:59 2015-Jan-31, Sat, 14:30 2015-May-03, Sun, 17:07 2015-May-22, Fri, 16:27	Clear Clear Clear Clear	Rear end Rear end Rear end Angle	P.D. only P.D. only P.D. only P.D. only	Dry Dry Dry Dry	South South South South East East South West	Slowing or stopping Stopped Turning right Turning right Slowing or stopping Stopped Turning right Going ahead	Automobile, station wagon Automobile, station wagon Automobile, station wagon Automobile, station wagon Pick-up truck Automobile, station wagon Automobile, station wagon Municipal transit bus	Other motor vehicle Other motor vehicle	0 0 0 0 0 0



Location: INNES	RD @ ORLE	ANS BLVD							
Traffic Control: Tra	ffic signal						Total Collisions:	68	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jul-09, Thu,17:10	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	
2015-Jul-14, Tue,08:10	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	
2015-Aug-27, Thu,18:04	Clear	SMV other	P.D. only	Dry	South	Turning right	Automobile, station wagon	Pole (sign, parking met	er) 0
2015-Sep-01, Tue, 11:55	Clear	Angle	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2015-Oct-18, Sun,09:49	Clear	Angle	P.D. only	Dry	South	Turning right	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2015-Oct-21, Wed, 15:45	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Passenger van	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2015-Oct-28, Wed,13:51	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	
2016-Jan-19, Tue,18:45	Clear	Rear end	P.D. only	Dry	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2016-Jan-25, Mon,18:40	Clear	Rear end	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2016-Feb-23, Tue,19:59	Clear	Rear end	Non-fatal injury	Packed snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Passenger van	Other motor vehicle	
2016-Mar-12, Sat,21:07	Clear	Angle	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Apr-12, Tue, 18:41	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



Location: INNES	RD @ ORLE	ANS BLVD							
Traffic Control: Tra	ffic signal						Total Collisions:	68	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped
2016-Apr-28, Thu,10:30	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-May-22, Sun,11:04	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jun-09, Thu,19:16	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Passenger van	Other motor vehicle	
2016-Jul-10, Sun,21:52	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Jul-21, Thu,13:08	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
					West	Stopped	Pick-up truck	Other motor vehicle	
2016-Jul-28, Thu,16:00	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	g Pick-up truck	Other motor vehicle	0
					East	Slowing or stopping	g Pick-up truck	Other motor vehicle	
2016-Oct-13, Thu,09:41	Rain	Turning movement	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Oct-14, Fri,08:16	Clear	Angle	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2016-Oct-22, Sat,01:34	Clear	Rear end	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Passenger van	Other motor vehicle	
2016-Oct-26, Wed,11:22	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	



Location: INNES	RD @ ORLEA	NS BLVD							
Traffic Control: Tra	ffic signal						Total Collisions:	68	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Nov-02, Wed, 17:03	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Turning left	Pick-up truck	Other motor vehicle	
2016-Dec-08, Thu,19:01	Snow	Turning movement	Non-fatal injury	Slush	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Jan-02, Mon,13:43	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Jan-13, Fri,14:41	Clear	Rear end	Non-fatal injury	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					East	Turning left	Pick-up truck	Other motor vehicle	
2017-Jan-22, Sun,16:30	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Passenger van	Other motor vehicle	
2017-Feb-15, Wed,09:00	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	
2017-Mar-06, Mon,16:38	Freezing 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	
2017-Mar-30, Thu,18:22	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-Apr-02, Sun,11:32	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-May-18, Thu,08:47	Clear	SMV other	Non-fatal injury	Dry	East	Going ahead	Pick-up truck	Pedestrian	1
2017-Jun-02, Fri,13:39	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	



Location: INNES	RD @ ORLEA	NS BLVD							
Traffic Control: Tra	ffic signal						Total Collisions:	68	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jun-22, Thu,16:30	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2017-Jun-29, Thu,16:10	Rain	Sideswipe	P.D. only	Wet	East	Changing lanes	Delivery van	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Sep-07, Thu,07:24	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Nov-16, Thu,18:28	Rain	Turning movement	P.D. only	Wet	East	Going ahead	Unknown	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Nov-22, Wed, 16:17	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jan-05, Fri,17:49	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	
2018-Jan-16, Tue,17:54	Freezing Rain	Rear end	P.D. only	lce	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jan-27, Sat,14:15	Clear	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	
2018-Feb-11, Sun,19:15	Snow	Turning movement	P.D. only	Loose snow	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Mar-13, Tue,15:15	Snow	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	
2018-Jun-15, Fri,16:03	Clear	Rear end	P.D. only	Dry	West	Going ahead	Truck - closed	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	



Location: INNES	RD @ ORLE	ANS BLVD							
Traffic Control: Tra	ffic signal						Total Collisions:	68	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2018-Sep-23, Sun,19:56	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Sep-25, Tue, 12:23	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Oct-13, Sat,14:17	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Nov-16, Fri,06:26	Snow	Rear end	P.D. only	Loose snow	East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Dec-02, Sun,15:02	Rain	SMV other	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Pedestrian	1
2018-Dec-09, Sun,16:49	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	
2018-Dec-29, Sat,17:52	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	
2019-Jan-26, Sat,20:02	Clear	Turning movement	P.D. only	lce	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-31, Thu,15:30	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Unknown	Unknown	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-May-02, Thu,09:00	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-Jun-25, Tue,19:45	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Pick-up truck	Other motor vehicle	
2019-Jul-26, Fri,15:43	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	



Location: INNES	RD @ ORLEA	ANS BLVD							
Traffic Control: Traf	ffic signal						Total Collisions:	68	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped
2019-Aug-01, Thu,10:20	Clear	Turning movement	P.D. only	Dry	North	Turning left	Passenger van	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-08, Thu,15:02	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Delivery van	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Oct-17, Thu,05:49	Rain	Turning movement	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-03, Sun,16:10	Rain	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	
2019-Nov-15, Fri,21:26	Clear	Turning movement	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Nov-27, Wed, 17:16	Rain	SMV other	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Pedestrian	1
2019-Dec-03, Tue,23:30	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Unknown	Other motor vehicle	
Location: INNES	RD @ PAGE	RD							
Traffic Control: Trat	ffic signal						Total Collisions:	31	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped
2015-Jan-14, Wed,08:40	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	g Pick-up truck	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2015-Feb-20, Fri,07:15	Clear	Rear end	P.D. only	Loose snow	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	



Location: INNES	RD @ PAGE	RD								
Traffic Control: Tra	ffic signal				Total Collisions: 31					
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped	
2015-Jul-14, Tue,18:58	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		
					West	Stopped	Automobile, station wagon	Other motor vehicle		
2015-Jul-21, Tue,13:20	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stoppin	g Pick-up truck	Other motor vehicle	0	
					East	Stopped	Automobile, station wagon	Other motor vehicle		
2015-Jul-30, Thu,20:45	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		
2015-Sep-28, Mon,08:12	Clear	Angle	P.D. only	Dry	West	Turning right	School bus	Other motor vehicle	0	
					North	Stopped	Construction equipment	Other motor vehicle		
2015-Oct-11, Sun,17:24	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		
2015-Dec-04, Fri,17:43	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0	
					East	Stopped	Pick-up truck	Other motor vehicle		
2016-Mar-23, Wed,10:52	Clear	Rear end	P.D. only	Dry	West	Going ahead	Delivery van	Other motor vehicle	0	
					West	Stopped	Truck - closed	Other motor vehicle		
2016-Oct-22, Sat,11:07	Rain	Sideswipe	P.D. only	Wet	East	Changing lanes	Pick-up truck	Other motor vehicle	0	
					East	Going ahead	Pick-up truck	Other motor vehicle		
2016-Nov-03, Thu,07:05	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Pick-up truck	Pedestrian	1	
2016-Nov-04, Fri,21:47	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		
2016-Nov-23, Wed,06:45	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0	
					West	Stopped	Pick-up truck	Other motor vehicle		
2017-Feb-01, Wed,13:36	Clear	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0	
					West	Stopped	Automobile, station wagon	Other motor vehicle		
						Clopped	. atomosilo, station wagon			



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Location: INNES	RD @ PAGE	KD							
Traffic Control: Tra	ffic signal						Total Collisions:	31	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped
2017-Jun-01, Thu,12:22	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2017-Nov-03, Fri,18:30	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-20, Mon,08:01	Freezing Rain	Rear end	P.D. only	lce	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	
2017-Nov-23, Thu,16:52	Snow	Sideswipe	P.D. only	Wet	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	
2017-Nov-29, Wed, 16:51	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Truck - dump	Other motor vehicle	
2018-Jan-26, Fri,16:54	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-May-14, Mon,18:39	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Pedestrian	1
2018-Jun-04, Mon,00:00	Clear	SMV other	Non-fatal injury	Dry	North	Going ahead	Unknown	Pedestrian	1
2018-Jul-16, Mon,21:34	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Debris on road	0
2018-Oct-01, Mon,17:10	Clear	Other	P.D. only	Dry	South	Reversing	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-13, Tue,08:12	Snow	Rear end	P.D. only	Loose snow	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-13, Tue, 14:54	Rain	Rear end	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	



Location: INNES	RD @ PAGE	RD							
Traffic Control: Tra	ffic signal						Total Collisions:	31	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2019-Jan-28, Mon,07:30	Clear	Rear end	P.D. only	Packed snow	West	Slowing or stoppin	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Mar-08, Fri,20:50	Clear	Turning movement	P.D. only	Dry	West	Turning left	Unknown	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-06, Thu,23:42	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-18, Tue,06:21	Clear	Rear end	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Municipal transit bus	Other motor vehicle	
2019-Sep-13, Fri,19:43	Clear	SMV other	P.D. only	Dry	West	Turning left	Automobile, station wagon	Curb	0
Location: INNES	RD @ VISEN	IEAU DR							
Traffic Control: Tra	ffic signal						Total Collisions:	41	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	er Vehicle type	First Event	No. Ped
2015-Jan-02, Fri,18:19	Clear	Rear end	P.D. only	Dry	West	Turning left	Unknown	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2015-Jan-16, Fri,20:09	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	
2015-Jan-30, Fri,19:35	Clear	Rear end	P.D. only	Wet	South	Going ahead	Passenger van	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2015-Apr-30, Thu,14:06	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2015-Jun-10, Wed,08:20	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stoppin	g Pick-up truck	Other motor vehicle	0
					West	Slowing or stoppin	g Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	



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Location: INNES	RD @ VISEN	EAU DR							
Traffic Control: Tra	ffic signal						Total Collisions:	41	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped
2015-Oct-08, Thu,15:32	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	
2016-Feb-05, Fri,18:00	Clear	Other	P.D. only	Dry	Unknown	Unknown	Unknown	Other motor vehicle	0
					West	Slowing or stopping	g Pick-up truck	Other motor vehicle	
2016-Feb-27, Sat,12:30	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Apr-04, Mon,13:34	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	
2016-Apr-06, Wed, 20:10	Snow	Angle	P.D. only	Loose snow	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Apr-30, Sat,11:41	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jun-21, Tue,15:20	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
2016-Aug-24, Wed, 18:35	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Passenger van	Other motor vehicle	
2016-Nov-01, Tue,11:00	Clear	Angle	P.D. only	Dry	North	Turning right	Passenger van	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2016-Nov-26, Sat,11:30	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Dec-23, Fri,11:55	Clear	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	



Location: INNES	RD @ VISENE	EAU DR									
Traffic Control: Total Collisions: 41											
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped		
2016-Dec-29, Thu,18:05	Snow	Turning movement	P.D. only	Packed snow	South	Turning right	Municipal transit bus	Other motor vehicle	0		
					South	Stopped	Automobile, station wagon	Other motor vehicle			
2017-Jan-04, Wed,18:00	Snow	Turning movement	P.D. only	Slush	West	Turning left	Automobile, station wagon	Other motor vehicle	0		
					East	Going ahead	Automobile, station wagon	Other motor vehicle			
2017-Jan-10, Tue,21:06	Freezing Rain	Turning movement	P.D. only	Loose snow	West	Turning right	Automobile, station wagon	Other motor vehicle	0		
					West	Going ahead	Automobile, station wagon	Other motor vehicle			
					South	Stopped	Automobile, station wagon	Other motor vehicle			
2017-Mar-20, Mon,10:17	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			
2017-Nov-05, Sun,16:39	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-Jan-05, Fri,17:31	Snow	Rear end	P.D. only	Slush	East	Going ahead	Automobile, station wagon	Other motor vehicle	0		
					East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle			
2018-Jan-15, Mon,15:54	Clear	Sideswipe	P.D. only	Packed snow	East	Going ahead	Automobile, station wagon	Other motor vehicle	0		
					East	Going ahead	Bus (other)	Other motor vehicle			
2018-Jan-20, Sat,14:22	Clear	Sideswipe	P.D. only	Wet	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0		
					East	Going ahead	Automobile, station wagon	Other motor vehicle			
2018-Mar-19, Mon,17:20	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			
2018-May-25, Fri,16:41	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			



Location: INNES	RD @ VISEN	EAU DR							
Traffic Control: Tra	ffic signal						Total Collisions:	41	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped
2018-Jun-02, Sat,19:10	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	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jul-17, Tue,16:09	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	
2018-Oct-10, Wed, 14:05	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Oct-12, Fri,09:45	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jan-21, Mon,12:30	Clear	Rear end	P.D. only	Ice	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Feb-02, Sat,13:50	Snow	Angle	P.D. only	Loose snow	East	Turning right	Passenger van	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Apr-09, Tue,06:39	Snow	SMV other	P.D. only	lce	West	Slowing or stopping	g Automobile, station wagon	Ran off road	0
2019-Jul-05, Fri,23:55	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Pulling onto shoulder or toward curb	Municipal transit bus	Other motor vehicle	
2019-Jul-28, Sun,10:24	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Sep-06, Fri,14:00	Clear	Turning movement	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Sep-17, Tue,17:00	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Slowing or stopping	g Passenger van	Other motor vehicle	



Location: INNES	RD @ VISEN	EAU DR							
Traffic Control: Trat	ffic signal						Total Collisions:	41	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2019-Sep-30, Mon,19:33	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Unknown	Other motor vehicle	
2019-Oct-01, Tue,21:35	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-27, Wed, 17:00	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-Dec-13, Fri,17:10	Clear	SMV other	Fatal injury	Dry	West	Going ahead	Automobile, station wagon	Pedestrian	1
Location: INNES	RD btwn 473	E OF PAGE RD	/BUILDERS' WAREI	HOUSE SC &	GREENV	ALE LANE			
Traffic Control: No	control						Total Collisions:	2	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2016-May-02, Mon,13:53	Clear	Angle	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jan-22, Mon,16:37	Snow	Sideswipe	P.D. only	Loose snow	East	Overtaking	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Snow plow	Other motor vehicle	
Location: INNES	RD btwn GRE	ENVALE LANE	& VISENEAU DR						
Traffic Control: No	control						Total Collisions:	4	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2015-Dec-21, Mon,11:07	Freezing Rain	Sideswipe	P.D. only	Ice	West	Changing lanes	Pick-up truck	Skidding/sliding	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Jun-18, Sat,14:50	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Changing lanes	Passenger van	Other motor vehicle	



Location: INNES	RD btwn GRE	EENVALE LANE	& VISENEAU DR						
Traffic Control: No	control						Total Collisions	4	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2016-Aug-26, Fri,17:09	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Passenger van	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-17, Sun,22:06	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	
Location: INNES	RD btwn INN	ES RD & PAGE	RD						
Traffic Control: No	control						Total Collisions	8	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2015-Jan-22, Thu,08:53	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	
2015-May-05, Tue,07:24	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
					West	Stopped	Pick-up truck	Other motor vehicle	
2015-May-13, Wed,07:45	Clear	Rear end	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
					West	Going ahead	Pick-up truck	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Jul-16, Thu,08:07	Clear	Sideswipe	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Municipal transit bus	Other motor vehicle	
2015-Oct-03, Sat,15:49	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Oct-08, Thu,15:19	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	g Pick-up truck	Other motor vehicle	0
					East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	
					East	Changing lanes	Automobile, station wagon	Other motor vehicle	



Location: INNES	RD btwn INN	ES RD & PAGE	RD						
Traffic Control: No	control						Total Collisions:	8	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2016-Nov-19, Sat,18:49	Clear	Rear end	Non-reportable	Dry	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Oct-20, Fri,06:12	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
Location: INNES	RD btwn PAG	E RD & 473 E C	F PAGE RD/BUILD	ERS' WAREH	OUSE SC)			
Traffic Control: No	control						Total Collisions:	15	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2015-Jan-14, Wed,09:38	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2015-Nov-30, Mon,09:51	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
2016-Feb-17, Wed,20:46	Clear	Angle	P.D. only	Packed snow	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Apr-20, Wed, 16:58	Clear	Sideswipe	P.D. only	Dry	West	Overtaking	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Sep-30, Fri,18:25	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Passenger van	Other motor vehicle	
2016-Oct-19, Wed, 17:00	Clear	Angle	Non-fatal injury	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jan-31, Tue,16:38	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2017-Feb-01, Wed,06:49	Clear	Rear end	P.D. only	Loose snow	West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	



Location: INNES	RD btwn PAG	E RD & 473 E OF	PAGE RD/BUILD	ERS' WAREH	OUSE SC	>			
Traffic Control: No	control						Total Collisions:	15	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2017-Jun-01, Thu,01:16	Clear	Sideswipe	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Nov-14, Tue,16:12	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Police vehicle	Other motor vehicle	
2018-Apr-26, Thu,18:06	Clear	Turning movement	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Making "U" turn	Automobile, station wagon	Other motor vehicle	
2018-Nov-22, Thu,14:37	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	
2018-Dec-31, Mon,21:30	Snow	Angle	P.D. only	Packed snow	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Apr-21, Sun,19:26	Clear	SMV other	P.D. only	Dry	West	Slowing or stopping	g Automobile, station wagon	Ran off road	0
2019-Jul-10, Wed,07:15	Clear	Angle	P.D. only	Dry	South	Turning right	Truck - closed	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
Location: INNES	RD EB btwn C	ORLEANS BLVD &	INNES RD						
Traffic Control: No	control						Total Collisions:	4	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2015-Oct-05, Mon,18:56	Clear	Sideswipe	Non-fatal injury	Dry	East	Changing lanes	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Dec-07, Mon,17:05	Clear	Sideswipe	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2016-Mar-20, Sun,16:55	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	



Location: INNES	RD EB btwn (ORLEANS BLVD	& INNES RD						
Traffic Control: No	control						Total Collisions:	4	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2017-Jan-05, Thu,09:44	Clear	Sideswipe	P.D. only	Wet	West	Merging	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
Location: INNES	RD WB btwn	ORLEANS BLVI	D & INNES RD						
Traffic Control: No	control						Total Collisions:	5	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2016-Jan-19, Tue,18:20	Snow	Rear end	P.D. only	Slush	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Changing lanes	Pick-up truck	Other motor vehicle	
2016-May-21, Sat,16:15	Clear	Rear end	P.D. only	Dry	West	Slowing or stoppin	g Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stoppin	g Pick-up truck	Other motor vehicle	
2016-Dec-04, Sun,06:02	Clear	SMV other	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Ran off road	0
2019-Jan-21, Mon,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-Mar-05, Tue,16:38	Snow	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	



Location: INNES	RD btwn PAC	GE RD & 473 E (OF PAGE RD/BUILD	ERS					
Traffic Control: No	control						Total Collisions	: 3	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2020-Jan-25, Sat,17:00	Snow	SMV other	P.D. only	Slush	West	Going ahead	Automobile, station wagon	Snowbank/drift	0
2020-Apr-20, Mon,19:59	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	g Pick-up truck	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2020-Jul-06, Mon,07:05	Clear	SMV other	Non-fatal injury	Dry	West	Going ahead	Motorcycle	Skidding/sliding	0
Location: INNES	RD @ 473 E	OF PAGE RD/B	UILDERS' WAREHO	DUS					
Traffic Control: Tra	affic signal						Total Collisions	: 2	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2020-Jan-10, Fri,11:00	Clear	Rear end	P.D. only	Dry	West	Unknown	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jan-23, Thu,12:57	Clear	SMV other	Non-fatal injury	Wet	South	Turning left	Pick-up truck	Pedestrian	1
Location: INNES	RD @ ORLE	ANS BLVD							
Traffic Control: Tra	affic signal						Total Collisions	: 7	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2020-Feb-15, Sat,09:29	Clear	Rear end	P.D. only	Slush	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Feb-25, Tue,11:45	Clear	Rear end	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Jun-15, Mon,13:05	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2020-Jun-18, Thu,08:52	Clear	Sideswipe	P.D. only	Dry	East	Turning left	Fire vehicle	Other motor vehicle	0
					East	Turning left	Municipal transit bus	Other motor vehicle	
2020-Aug-25, Tue,10:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	



Location: INNES	RD @ ORLE	ANS BLVD							
Traffic Control: Tra	ffic signal						Total Collisions	: 7	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2020-Oct-02, Fri,10:55	Rain	Rear end	P.D. only	Wet	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
2020-Nov-22, Sun,17:45	Snow	SMV other	P.D. only	lce	South	Turning right	Automobile, station wagon	Skidding/sliding	0
Location: INNES	RD @ PAGE	RD							
Traffic Control: Tra	ffic signal						Total Collisions	: 2	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2020-Feb-08, Sat,16:29	Clear	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2020-May-13, Wed,00:13	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
Location: INNES	RD @ VISEN	EAU DR							
Traffic Control: Tra	ffic signal						Total Collisions	: 3	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2020-Feb-24, Mon,15:46	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jul-06, Mon,17:55	Clear	Sideswipe	P.D. only	Dry	South	Turning right	Other school vehicle/bus	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Dec-30, Wed,21:39	Snow	Other	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Pick-up truck	Other motor vehicle	
Location: INNES	RD btwn GRE	EENVALE LANE &	VISENEAU DR						
Traffic Control: No	control						Total Collisions	: 1	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped



Location: INNES	RD btwn GR	EENVALE LANE	& VISENEAU DR							
Traffic Control: No	control				Total Collisions: 1					
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver Vehicle type	First Event	No. Ped		
2020-Nov-08, Sun,13:24	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			
					East	Going ahead Pick-up truck	Other motor vehicle			
Location: INNES	RD btwn INN	ES RD & PAGE	RD							
Traffic Control: No	control					Total Collisi	ions: 1			
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver Vehicle type	First Event	No. Ped		
2020-Sep-28, Mon,18:59	Clear	Rear end	P.D. only	Dry	East	Going ahead Pick-up truck	Other motor vehicle	0		
					East	Slowing or stopping Passenger van	Other motor vehicle			

APPENDIX F

Strategic Long-Range Model Snapshots and Excerpt of 2013 TMP

2.3 Population and Employment in 2031

Where growth will occur. The City has prepared population and employment growth projections for the period from 2011 to 2031 (see Exhibit 2.10). The City expects a 23% increase in population from 922,000 to 1.14 million people, and a 24% increase in employment from 565,000 to 703,000 jobs. Although infill development and intensification are forecast to increase the population of Ottawa's Inner Area and Inner Suburbs by about 46,000 people over the next 18 years, most growth (about 168,000 people) will occur in the Outer Suburbs. In contrast, 72% of employment growth will occur inside the Greenbelt.

Exhibit 2.10 Population and Employment: 2011 Actual and 2031 Projections												
		Populat	ion	Employment								
Area	2011	2031 Growth and distribution		2011	2031	Growth & distribution						
Inner Area	97,200	116,400	19,200 (9%)	170,600	201,800	31,200 (23%)						
Inner Suburbs	432,500	459,300	26,800 (13%)	287,400	355,300	67,900 (49%)						
Kanata/Stittsville	105,200	162,000	56,800 (27%)	51,300	62,500	11,200 (8%)						
Barrhaven	71,200	107,400	36,200 (17%)	11,100	21,800	10,700 (8%)						
Riverside South/Leitrim	15,900	35,800	19,900 (9%)	4,000	7,800	3,800 (3%)						
Orléans	108,200	143,400	35,200 (16%)	20,600	33,000	12,400 (9%)						
Rural Ottawa	91,400	111,700	20,300 (9%)	20,000	20,900	900 (1%)						
Total	922,000	1,135,900	213,900 (100%)	564,900	703,200	138,100 (100%)						






APPENDIX G

Other Area Developments

PARSONS



Transportation Impact Study

1 INTRODUCTION

From the information provided, a residential development consisting of approximately 534 residential units (single family homes and town homes) is being proposed on the property municipally known as 3490 Innes Road. These lands are currently zoned for employment land use, therefore a rezoning is required to develop the site as residential. The property in its entirety extends south of Innes Road for approximately 1 km and from approximately 50 to 400 m east of Pagé Road. The land is currently occupied by a golf range/mini-putt and farmland. As shown in Figure 1: Site Context, the proposed residential development is planned on the southern end of the site located approximately 325 m south of Innes Road. Future development is planned on the lands north of the planned residential community, which is not included in the analysis herein. The proposed Site Plan is provided as Figure 2.



Figure 1: Site Context

As part of the Rezoning and Draft Plan of Subdivision Application processes, the City of Ottawa requires submission of a formal Transportation Impact Assessment (TIA) consistent with their guidelines dated October 2006. With respect to these guidelines and through discussions with the City of Ottawa, a Transportation Impact Study (TIS) is considered the appropriate type of study for the subject rezoning.

The proposed development is expected to be constructed in two phases. For the purpose of this assessment, Phase 1 will consist of half of the units (approximately 267 units) and is expected to be built by 2020, and Phase 2, consisting of the remainder of units (267 units) is expected to be constructed by 2024.

PARSONS

Figure 6: Phase 1 'New' Site-Generated Traffic Volumes



Figure 7: Phases 1 and 2 'New' Site-Generated Traffic Volumes



1 Screening

This study has been prepared according to the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines. Accordingly, a Step 1 Screening Form has been prepared and is included as Appendix A, along with the Certification Form for the TIA Study PM. As shown in the Screening Form, a TIA is required including the Design Review component and the Network Impact Component. This study has been prepared to support a zoning by-law amendment and draft plan of subdivision application.

2 Existing and Planned Conditions

2.1 Proposed Development

The existing site, located at 245 and 275 Lamarche Avenue, is zoned as Development Reserve (DR). The proposed development consists of 103 townhomes, 72 back-to-backs dwellings. The new development will constitute the second phase of the Orleans Village subdivision. The concept plan includes two full-movement accesses onto Lamarche Avenue. The anticipated full build-out and occupancy horizon is 2025 with construction occurring in a single phase. The site is located within the Innes Arterial Mainstreet area. Figure 1 illustrates the study area context. Figure 2 illustrates the proposed concept plan.



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: March 21, 2022







6 Background Network Travel Demands

6.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3 and no impacts on the study area traffic volumes and travel patterns are anticipated within the study horizons.

6.2 Background Growth

A review of the background projections from the City's TRANS Regional Model for the 2011 and 2031 horizons was completed to determine the background growth for each of the study area roadways. The background TRANS model growth rates are summarized in Table 11 and the TRANS model plots are provided in Appendix E.

Street	TRANS	S Rate	Existing to 2031			
	Eastbound	Westbound	Eastbound	Westbound		
Innes Road	-0.28%	-1.64%	-3.14%	-5.02%		
	Northbound	Southbound	Northbound	Southbound		
Orleans Boulevard	4.02%	-0.95%	0.45%	1.92%		

Table 11: TRANS Regional Model Projections – Study Area Growth Rates

In general, the growth rates in the study area derived from the two TRANS model horizons are projected to be negative along Innes Road in the eastbound and westbound directions and slightly positive along Orleans Boulevard in the northbound direction. The existing volumes are noted to be exceed the TRANS 2031 model forecasts for Innes Road.

As the continued development is expected in Orleans and result in additional volumes along the area road network, beyond the developments considered in Section 6.3, it is assumed that a 1.00% growth rate will be applied to Innes Road and a 2.00% growth rate will be applied on Orleans Boulevard in peak directions. The modified growth rates have been applied to the study area network, and it is summarized in Table 12.



• Safety Triggers – The proposed access to Innes Road is within the area of influence of a signalized intersection, located within an auxiliary lane for that intersection, and makes use of an existing median break; further assessment is **required** based on this trigger.

Figure 1: View of the Subject Site







Figure 6: Proposed Site-Generated Traffic Volumes





TIA Strategy Report

Parsons has been retained by Lépine Corp. (Lépine) to prepare a Transportation Impact Assessment (TIA) in support of a Zoning By-Law Amendment (ZBLA) and Plan of Subdivision Application for a new residential focused development located at 3490 Innes Road in the Orléans Ward. This document follows the new TIA process, as outlined in the City Transportation Impact Assessment (TIA) Guidelines (2017).

The applicant previously submitted a TIA in support of a ZBLA on February 13, 2020. Since that time, Lépine has developed four (4) different development proposals that significantly reduce the scale and density to better align with the ultimate vision for the property. This report represents Step 4 – Strategy Report that details the transportation implications related to these potential development proposals by Lépine.

1. Screening Form

The screening form confirmed the need for a TIA Report based on the Trip Generation trigger, given that the proposed development consists of more than 89 residential apartment units; the Location trigger given that the development is located within a future cycling spine route, transit priority corridor with isolated measures and is within the Innes Arterial Mainstreet Design Priority Area (DPA); and the Safety trigger given that the proposed driveway is within the influence of potential future signalized intersection at Lamarche/Innes and one of the development proposals includes a drive-thru facility. The Screening Form has been provided in **Appendix A**.

2. Scoping Report

2.1. Existing and Planned Conditions

2.1.1. PROPOSED DEVELOPMENT

The proposed development is located at the municipal addresses of 3490 Innes Road, on the southwest corner of the Lamarche/Innes intersection. The site is currently occupied by small scale commercial properties, including an insurance company, food truck, mini-put facility and driving range. The proposed study area includes the intersections of Orléans/Innes, Pagé/Innes, Lamarche/Innes, Boyer/Innes and roadway segments adjacent to site or between intersections as shown in **Figure 1**. More details regarding the study area elements can be found in **Section 2.1.2**.





Figure 15: 'New' Site-Generated Peak Hour Traffic



3.2. Background Network Travel Demands

3.2.1. TRANSPORTATION NETWORK PLANS

Refer to section 2.1.3 Planned Conditions - Planned Study Area Transportation Network Changes.

3.2.2. BACKGROUND GROWTH

The background traffic growth through the immediate study area, summarized in **Table 22**, was calculated based on historical traffic count data (years 2003, 2004, 2014, and 2017) provided by the City of Ottawa at the Orléans/Innes intersection. Detailed analysis of the background growth is included in **Appendix F**.

Time Deried	Percent Annual Change							
Time Penou	North Leg	South Leg	East Leg	West Leg	Overall			
8 hrs	1.35%	-0.20%	4.38%	2.53%	2.70%			
AM Peak	0.69%	0.14%	3.81%	1.75%	2.08%			
PM Peak	0.01%	-0.68%	3.45%	1.60%	1.66%			

As shown in **Table 22**, in past years Innes Road and Orléans Boulevard has experienced an average annual growth ranging from +1.66% to +2.70%. Overall, minimal growth was observed on north-south movement and growth rates ranging from +1.6% to +4.38% were observed on Innes Road on east-west travel. These high traffic growth rates were a direct result of urban expansion along the Innes corridor towards Trim Road since 2003. Today, there are few undeveloped areas left along Innes Road to fuel significant traffic growth. The few nearby developments that are expected to contribute traffic within the study area were accounted for independently. This process is discussed in further detail in the following section.

Additionally, the City is planning to construct and has already constructed some adjacent road network connections (e.g. to Brian Coburn) and alternate mode infrastructure (e.g. transit priority measures and pedestrian/cycling facilities) to reduce the reliance and traffic pressures on Innes Road. Therefore, a 1% annual growth rate for traffic on Innes Road east-west through movement was considered appropriate to estimate future traffic growth.

3.2.3. OTHER AREA DEVELOPMENTS

Trips generated by other area developments were accounted within the study area. A summary of each development was provided in **Section 2.1.3**.



Exhibit 2.1: Existing Traffic Control and Lane Configurations



Exhibit 3.1: Site and Total Traffic Volumes



Figure 1: View of the Subject Site



In 2023 and 2028, trips to/from the east generated by the lower-density units and all trips generated by the medium-density units have all been assigned to the Innes Road/473m East of Pagé Road connection. Trips to/from the west generated by the lower-density units have been assigned to the Innes Road/Caivan Access and Innes Road/473m East of Pagé Road connections, with a majority of trips assigned to Innes Road/473m East of Pagé Road. The assumed trip assignment by 2023 and 2028 is described as follows:

Lower-Density Portion

- Innes Road/Caivan Access: 20% of trips to/from the west;
- Innes Road/473m East of Pagé Road: 100% of trips to/from the east and 80% of trips to/from the west.

Medium-Density Portion

• Innes Road/473m East of Pagé Road: 100% of trips to/from the east and west.

The EUC MTS identifies that any lands owned by Richcraft will not be developed by 2031. As such, while a connection to the future Richcraft Subdivision will be constructed, no trips have been assigned to this connection.

The EUC CDP identifies a future conceptual access from the Richcraft Subdivision to Innes Road via a right-in/right-out local connection, as well as a connection to Brian Coburn Boulevard south of the study area, via an extension of Fern Casey Boulevard. These connections are considered in the analysis of the EUC, but are not considered in the analysis of this TIA.

Trips generated by the proposed subdivision in the 2021 Phase 1 year, 2023 buildout year, and 2028 horizon year are shown in **Figure 5** and **Figure 6**.



Figure 5: 2021 Site-Generated Traffic





5.2 Background Traffic

5.2.1 General Background Growth Rate

A rate of background growth has been established through a review of the City of Ottawa's 2013 Transportation Master Plan (TMP) and the City's Strategic Long Range Model (comparing snapshots of 2011 and 2031 AM peak hour volumes). Section 2.3 of the TMP projects a 33% growth in the population of the Orléans area between 2011 and 2031, which translates to an annual growth rate of approximately 1.4% per annum. The snapshots indicate traffic volume reductions on Innes Road due to the opening of Brian Coburn Boulevard, which acts as an alternate east-west arterial route. To account for potential developments in the area that are not discussed below, a 1% background growth has been applied to the eastbound and westbound through volumes on Innes Road throughout the study area.

5.2.2 Other Area Developments

Within the study area, multiple developments are anticipated or are in the approval process. The following developments will be added to the background traffic to maintain a conservative analysis. Relevant excerpts of the studies associated with the following developments are included in **Appendix F**. Trips generated by the below developments have been assigned based on the trip distributions described in their respective studies, unless otherwise noted.

3443 Innes Road (Six-Storey Mixed-Use Building)

A TIA was prepared by Novatech in December 2017 and later revised in June 2018, in support of a six-storey mixed-use development (Site Plan Application D07-12-17-0169). The development consists of 35 residential units and ground floor commercial units. All trips generated by the development have been added to the background traffic in 2021, 2023, and 2028.

FIGURE 2.1 SITE LOCATION PLAN



FIGURE 3.1 PEAK AM AND PM HOUR SITE GENERATED TRIPS



APPENDIX H

Signal Timing Plans

Traffic Signal Timing

City of Ottawa, Transportation Services Department Traffic Signal Operations Unit Intersection: Innes Side: Orleans Main: Controller: ATC 3 TSD: 5916

Date:

06-Jul-2021

Existing Timing Plans⁺

Matthew Anderson

Author:

	Plan				Ped Mir	nimum T	ime		
	AM Peak	Off Peak	PM Peak	Night	Weekend	AM Heavy	Walk	DW	A+R
	1	2	3	4	5	11			
Cycle	110	90	110	80	90	130			
Offset	79	10	0	х	10	99			
EB Thru	45	42	49	29	42	65	7	13	3.7 + 2.5
WB Thru	45	39	34	29	39	65	7	13	3.7 + 2.5
NB Left	19	-	12	-	-	19		-	3.3 + 3.4
NB Thru	52	33	45	33	33	52	7	19	3.3 + 3.4
SB Thru	33	33	33	33	33	33	7	19	3.3 + 3.4
EB Left (fp)	13	18	31	18	18	13	-	-	3.7 + 2.9
WB Left (fp)	13	15	16	18	15	13	-	-	3.7 + 2.5



Schedule

Weekday						
Time	Plan					
0:10	4					
6:00	11					
9:00	1					
9:30	2					
15:00	3					
18:30	2					
22:00	4					

Sunday							
Time	Plan						
0:10	4						
7:00	2						
10:00	5						
18:00	2						
19:00	4						

Notes

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

Saturday Time

0:10

7:00

9:00

19:00

20:00

Plan

4

2

5

2

4

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn Pedestrian signal **4**···· ·····•

Cost is \$59.96 (\$53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

Intersection:	Main:	Innes	Side:	Pa	gé
Controller:	ATC3		TSD	66	76
Author:	Matthew /	Anderson	Date	: 06	-Jul-2021

Existing Timing Plans[†]

	Plan	Ped Minimum Time							
	AM Peak	Off Peak	PM Peak	Night	Weekend	AM Rush	Walk	DW	A+R
	1	2	3	4	5	11			
Cycle	110	90	110	80	90	120			
Offset	26	43	2	Х	43	26			
EB Thru	72	52	72	42	52	82	15	18	3.7 + 2.5
WB Thru	72	52	72	42	52	82	15	18	3.7 + 2.5
NB Thru	38	38	38	38	38	38	7	24	3.0 + 3.8
SB Thru	38	38	38	38	38	38	7	24	3.0 + 3.8

Phasing Sequence[‡]

Plan: All



Schedule

Weekday						
Time	Plan					
0:10	4					
6:00	11					
9:00	1					
9:30	2					
15:00	3					
18:30	2					
22:00	4					

Saturday						
Time	Plan					
0:10	4					
7:00	2					
9:00	5					
19:00	2					
20:00	4					

Sunday						
Time	Plan					
0:10	4					
7:00	2					
10:00	5					
18:00	2					
19:00	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 \$59.96 (\$53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

Intersection:	Main:	Innes	Side:	Boyer/Bui	Iders Warehouse
Controller:	MS-320	0		TSD:	6370
Author:	Jon Pac	ch		Date:	05-Dec-2018

Existing Timing Plans[†]

	Plan	Ped Minimum Time												
	AM Peak	Off Peak	PM Peak	Night	Weekend	AM Rush	Walk	DW	A+R					
	1	2	3	4	5	11								
Cycle	110	90	110	70	90	120								
Offset	0	43	36	Х	43	0								
EB Thru	77	57	77	37	57	87	12	14	3.7 + 2.4					
WB Thru	77	57	77	37	57	87	12	14	3.7 + 2.4					
NB Thru	33	33	33	33	33	33	7	19	3.3 + 3.0					
SB Thru	33	33	33	33	33	33	7	19	3.3 + 3.0					

Phasing Sequence[‡]

Plan:



Schedule

Weekday	
Time	Plan
0:10	4
6:00	11
9:00	1
9:30	2
15:00	3
18:30	2
22:00	4

Saturda	у
Time	Plan
0:10	4
7:00	2
9:00	5
20:00	2
22:00	4

Sunday	
Time	Plan
0:10	4
7:00	2
10:00	5
19:00	2
22:00	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

APPENDIX I

Existing Synchro Analysis

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ካካ	**	1	N	**	1	X	**	1	X	**	1
Traffic Volume (vph)	121	348	23	24	1200	149	203	259	44	68	100	459
Future Volume (vph)	121	348	23	24	1200	149	203	259	44	68	100	459
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0			40.0			10.0		I.	20.0		
Lane Litil Factor	40.0 0 Q7	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00
Ped Bike Factor	1.00	0.55	0.06	0.08	0.55	0.07	0.00	0.55	0.04	0.07	0.55	0.08
Frt	1.00		0.50	0.50		0.57	0.55		0.54	0.57		0.50
Fit Protected	0.050		0.000	0.050		0.000	0.050		0.000	0.950		0.000
Satd Elow (prot)	2005	21//	1/72	1572	3357	1502	1710	3357	1502	1670	2257	1530
Salu. Flow (plot)	2990	5144	1473	0.050	3307	1002	0 5 4 2	3357	1002	0.575	3357	1002
	0.950	2444	1440	0.950	2257	1400	0.040	2257	1110	0.575	2257	1500
Sato. Flow (perm)	2980	3144	1410	1547	3357	1402	972	3357	1413 Vaa	903	3357	1500
Right Turn on Red			Yes			Yes			res			Yes
Sato. Flow (RTOR)		00	143		00	143		50	82		50	155
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		264.5			491.4			387.7			301.9	
I ravel I ime (s)	•	15.9			29.5	•	•	27.9			21.7	
Confl. Peds. (#/hr)	6		14	14		6	6		32	32		6
Confl. Bikes (#/hr)						6						
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%	10%	5%	10%	3%	3%	1%	3%	3%	3%	3%	1%
Adj. Flow (vph)	134	387	26	27	1333	166	226	288	49	76	111	510
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	387	26	27	1333	166	226	288	49	76	111	510
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		9.0			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
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)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+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)	0.0	87.5	0.0	0.0	87.5	0.0	0.0	87.5	0.0	0.0	87.5	0.0
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
	Prot	0.0 ΝΔ	Perm	Prot	0.0 ΝΔ	Perm	nm+nt	0.0 ΝΔ	Perm	Perm	0.0 ΝΔ	Porm
Protected Phases	FIUL	- 2	i eiiii	1	6		pin+pi 2	0 N/A	i eiiii		11/4	
Permitted Phases	5	2	2	I	0	6	Q	0	Q	Λ	4	1
Detector Phases	F	0	2	1	6	0	0	0	0	4	4	4
Delector Fliase	5	2	2	I	0	0	3	0	0	4	4	4

J.Audia, Novatech

Synchro 10 Report

	۶	-	\mathbf{r}	4	+	×	1	1	1	1	ţ	4
Lane Group	FBI	FBT	FBR	WBI	WBT	WBR	NBI	NBT	NBR	SBI	SBT	SBR
Switch Phase												0211
Minimum Initial (s)	50	10.0	10.0	50	10.0	10.0	50	10.0	10.0	10.0	10 0	10 0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	13.0	65.0	65.0	13.0	65.0	65.0	19.0	52.0	52.0	33.0	33.0	33.0
Total Split (%)	10.0%	50.0%	50.0%	10.0%	50.0%	50.0%	14.6%	40.0%	40.0%	25.4%	25.4%	25.4%
Maximum Green (s)	6.4	58.8	58.8	6.8	58.8	58.8	12.3	45.3	45.3	26.3	26.3	26.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			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	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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		14	14		6	6		32	32	6	6	6
Act Effct Green (s)	6.4	64.0	64.0	6.5	58.8	58.8	45.3	45.3	45.3	26.3	26.3	26.3
Actuated g/C Ratio	0.05	0.49	0.49	0.05	0.45	0.45	0.35	0.35	0.35	0.20	0.20	0.20
v/c Ratio	0.91	0.25	0.03	0.35	0.88	0.22	0.55	0.25	0.09	0.38	0.16	1.19
Control Delay	114.9	20.6	0.1	71.8	40.3	5.5	38.0	30.9	1.9	51.5	43.5	139.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	114.9	20.6	0.1	71.8	40.3	5.5	38.0	30.9	1.9	51.5	43.5	139.2
LOS	F	С	А	E	D	А	D	С	А	D	D	F
Approach Delay		42.8			37.1			31.2			114.4	
Approach LOS		D			D			С			F	
Queue Length 50th (m)	16.5	29.4	0.0	6.3	147.5	3.0	39.9	25.3	0.0	15.6	11.4	~114.7
Queue Length 95th (m)	#34.6	39.7	0.0	15.5	177.6	14.6	60.2	35.7	2.6	30.0	19.2	#176.9
Internal Link Dist (m)		240.5			467.4			363.7		0	277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	147	1548	769	82	1518	739	408	1169	545	198	680	427
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced V/c Ratio	0.91	0.25	0.03	0.33	0.88	0.22	0.55	0.25	0.09	0.38	0.16	1.19
Intersection Summary	Others											
Area Type:	Other											
Astusted Cycle Length 120												
Offset: 99 (76%), Referenced t	o phase 2:E	BT and 6:\	NBT, Start	of Green								
Natural Cycle: 115												
Control Type: Actuated-Coordi	nated											
Maximum v/c Ratio: 1.19												
Intersection Signal Delay: 53.2				In	itersection	LOS: D						
Intersection Capacity Utilization 93.9% ICU Level of Service F												
Analysis Period (min) 15												
~ Volume exceeds capacity,	queue is the	oretically i	nfinite.									
Queue shown is maximum	after two cyc	les.										
# 95th percentile volume exc	eeds capaci	ty, queue i	may be lon	ger.								
Queue shown is maximum	after two cyc	les.										
Splits and Phases: 1: Orlear	ns & Innes											

 Ø1
 Ø2 (R)

 13s
 65s

 Ø5
 Ø6 (R)

 13s
 65s

 Ø5
 Ø6 (R)

 13s
 65s

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	2	A 1.		×	≜ 1⊾			4			4	
Traffic Volume (vph)	11	400	21	37	1200	19	14	12	38	33	9	42
Future Volume (vph)	11	400	21	37	1200	19	14	12	38	33	9	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	35.0			0.0			2.5			2.5		
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			0.99			0.99	
Frt		0.993		0.00	0.998			0.920			0.932	
Elt Protected	0.950	0.000		0.950				0.989			0.981	
Satd Flow (prot)	1586	3124	0	1503	3348	0	0	1569	0	0	1596	0
Elt Permitted	0 168	0121	Ŭ	0 484	0010	Ŭ	Ŭ	0.915	Ŭ	Ŭ	0.862	Ŭ
Satd Flow (perm)	280	3124	0	761	3348	0	0	1448	0	0	1402	0
Right Turn on Red	200	0121	Yes	701	0010	Yes	Ū	1110	Yes	U	1102	Yes
Satd Flow (RTOR)		8	100		2	100		42	100		41	100
Link Speed (k/b)		60			60			42			41	
Link Distance (m)		101 /			236.7			212.5			273 /	
Travel Time (s)		20.5			230.7			212.J 10.1			213.4	
Confl Peds (#/br)	1	23.5	7	7	14.2	1	11	13.1			24.0	11
Confl. Pikos (#/hr)	4		1	I		4	11		1			1
Dook Hour Footor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.90	1.90	0.90 E0/	1.50/	20/	0.90 E0/	10/	150/	20/	10/	1.90	20/
Adi, Flow (upb)	9%	10 %	0% 02	15%	1222	070	170	10%	3%	170 27	10 %	370
Auj. Flow (vpl) Sharad Lana Traffia (%)	١Z	444	23	41	1000	21	10	13	42	31	10	47
	10	167	٥	11	125/	٥	٥	71	٥	٥	04	0
Earle Group Flow (Vpri)	IZ No	407 No	U No	41	1504 No	U	U No	/ I	U	U	94 No	U
Enter Blocked Intersection	INU Loff	INO	Diabt	INU	INU	NU Diabt		INU			INO	
Lane Alignment	Len	Len	Right	Len	Len	Right	L NA	Len	RINA	LINA	Len	RINA
link Offeet(m)		0.0			3.7			0.0			0.0	
Link Onset(m)		10.0			10.0			0.0			0.0	
		10.0			10.0			5.0			J.U	
Two way Leit Tum Lane	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/n)	24	0	14	24	0	14	24	0	14	24	0	14
Number of Detectors	1 - 44	Z		ا ا	Z		ا	Z		ا	Z	
Detector Template	Len			Len			Len			Len	I nru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.0	93.0	
Trailing Detector (m)	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	
Detector 1 Size(m)		0.5 0. Ev			0.5			0.5 0. Ev			0.5	
Detector 1 Type	CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX	
Detector 1 Channel	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Extend (s)	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	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel		• •										
Detector 2 Extend (s)	_	0.0		_	0.0		-	0.0		_	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

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Synchro 10 Report

2: Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	39.2	39.2		39.2	39.2		37.8	37.8		37.8	37.8	
Total Split (s)	82.0	82.0		82.0	82.0		38.0	38.0		38.0	38.0	
Total Split (%)	68.3%	68.3%		68.3%	68.3%		31.7%	31.7%		31.7%	31.7%	
Maximum Green (s)	75.8	75.8		75.8	75.8		31.2	31.2		31.2	31.2	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2			6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	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		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	7	7		4	4		1	1		11	11	
Act Effct Green (s)	88.6	88.6		88.6	88.6			18.4			18.4	
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.15			0.15	
v/c Ratio	0.06	0.20		0.07	0.55			0.28			0.38	
Control Delay	8.3	6.2		4.6	6.7			21.4			28.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	8.3	6.2		4.6	6.7			21.4			28.3	
LOS	А	А		А	А			С			С	
Approach Delay		6.3			6.6			21.4			28.3	
Approach LOS		А			А			С			С	
Queue Length 50th (m)	0.4	9.3		1.5	39.5			6.0			11.1	
Queue Length 95th (m)	3.3	28.2		1.6	14.2			15.5			21.7	
Internal Link Dist (m)		467.4			212.7			188.5			249.4	
Turn Bay Length (m)	100.0			100.0								
Base Capacity (vph)	206	2308		561	2472			407			394	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.06	0.20		0.07	0.55			0.17			0.24	
Intersection Summary												
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 26 (22%), Referenced	to phase 2:E	BTL and 6:	WBTL, Sta	art of Gree	en							
Natural Cycle: 80												
Control Type: Actuated-Coord	inated											
Maximum v/c Ratio: 0.55												
Intersection Signal Delay: 8.0				In	tersection I	LOS: A						
Intersection Capacity Utilizatio	n 61.0%			IC	CU Level of	Service B						
Analysis Period (min) 15												
Splits and Phases: 2: Page	& Innes											



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	-	\rightarrow	1	-	1	1
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4 15		5	**	W.	
Traffic Volume (vph)	500	28	44	1200	45	45
Future Volume (vph)	500	28	44	1200	45	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	30.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		20.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.992				0.932	
Flt Protected			0.950		0.976	
Satd. Flow (prot)	3330	0	1679	3357	1607	0
Flt Permitted			0.950		0.976	
Satd. Flow (perm)	3330	0	1679	3357	1607	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	236.7			238.7	204.5	
Travel Time (s)	14.2			14.3	14.7	
Confl. Peds. (#/hr)		11	11			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	31	49	1333	50	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	587	0	49	1333	100	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	L NA	R NA
Median Width(m)	3.7	J		3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	9.0			9.0	9.0	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizati	ion 47.2%			IC	U Level of	Service A
Analysis Period (min) 15						

4: 473 E of Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	×.	≜1 ⊾		X	A 12				1		4	-
Traffic Volume (vph)	6	426	7	1	1291	4	0	0	1	1	0	3
Future Volume (vph)	6	426	7	1	1291	4	0	0	1	1	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	30.0	1000	0.0	40.0	1000	0.0	0.0	1000	0.0	0.0	1000	0.0
Storage Lanes	1		0.0	10.0		0.0	0.0		1	0.0		0.0
Taper Length (m)	20.0		U	30.0		Ū	20.0			20.0		Ū
Lane Litil 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	0.00	0.55	1.00	1.00	0.55	1.00	1.00	0.00	1.00	0.00	1.00
Frt	1.00	0 008			1.00				0.55		0.99	
Fit Protected	0.050	0.000		0.050					0.000		0.000	
Setd Elow (prot)	1710	2127	٥	1710	2257	٥	٥	1000	1520	٥	1500	٥
Salu. Flow (pibl)	0 172	3137	0	0 477	3337	0	U	1002	1002	U	0.014	U
	0.175	2427	0	0.477	2257	٥	0	1000	4544	٥	0.914	0
Sato. Flow (perm)	311	3137	U	000	3357	U	U	1802	1511	U	1404	U
Right Lurn on Red		2	res			res			res		00	res
Sato. Flow (RTOR)		3						10	442		28	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		238.7			292.8			151.9			62.6	
Travel Time (s)		14.3			17.6			13.7			5.6	
Confl. Peds. (#/hr)	7					7	2		1	1		2
Confl. Bikes (#/hr)						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 (%)	1%	10%	10%	1%	3%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	7	473	8	1	1434	4	0	0	1	1	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	481	0	1	1438	0	0	0	1	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
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)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane		Yes										
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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0	18.6	18.6	93.0	
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)	18.6	5.5		18.6	5.5		18.6	5.5	18.6	18.6	5.5	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	Cl+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel	OILX											
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Quoue (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)	0.0	0.0 87.5		0.0	0.0 87.5		0.0	0.0 87.5	0.0	0.0	0.0 87.5	
Detector 2 Fosition(iii)		07.5 E E			67.5			07.J			07.5	
Detector 2 Type												
Detector 2 Channel		UI+EX			CI+EX			UI+EX			CI+EX	
Detector 2 Unannel		0.0			0.0			0.0			0.0	
Detector 2 Extend (s)	P	0.0		D	0.0			0.0	P.	D	0.0	
	Perm	NA		Perm	NA			^	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2	-		6			8		8	4		
Detector Phase	2	2		6	6		8	8	8	4	4	

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Synchro 10 Report

4: 473 E of Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	87.0	87.0		87.0	87.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	72.5%	72.5%		72.5%	72.5%		27.5%	27.5%	27.5%	27.5%	27.5%	
Maximum Green (s)	80.9	80.9		80.9	80.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	1	1		7	7		1	1	1	2	2	
Act Effct Green (s)	112.3	112.3		112.3	112.3				13.2		13.2	
Actuated g/C Ratio	0.94	0.94		0.94	0.94				0.11		0.11	
v/c Ratio	0.02	0.16		0.00	0.46				0.00		0.02	
Control Delay	3.7	1.9		4.0	3.4				0.0		0.2	
Queue Delay	0.0	0.0		0.0	0.0				0.0		0.0	
Total Delay	3.7	1.9		4.0	3.4				0.0		0.2	
LOS	A	A		A	A				A		A	
Approach Delay		1.9			3.4						0.3	
Approach LOS	0.0	A		0.0	A				0.0		A	
Queue Length 50th (m)	0.0	0.0		0.0	0.0				0.0		0.0	
Queue Length 95th (m)	1./	22.4		0.0	101.7			107.0	0.0		0.0	
Turp Boy Longth (m)	20.0	214.7		40.0	200.0			127.9			30.0	
Paso Canacity (unh)	201	2036		40.0	31/12				670		347	
Starvation Can Boducto	291	2930		005	0				079		047 0	
Spillback Cap Reductin	0	0		0	0				0		0	
Storage Can Reductin	0	0		0	0				0		0	
Reduced v/c Ratio	0 02	0 16		0 00	0.46				0.00		0.01	
Intersection Summary	0.02	0.10		0.00	0.10				0.00		0.01	
Area Type:	Other											
Cycle Length: 120	outor											
Actuated Cycle Length: 120												
Offset: 0 (0%). Referenced to	phase 2:FBT	I and 6:WI	STL Start	of Green								
Natural Cycle: 75	p		,									
Control Type: Actuated-Coord	linated											
Maximum v/c Ratio: 0.46												
Intersection Signal Delay: 3.1				In	tersection	LOS: A						
Intersection Capacity Utilization	on 57.3%			IC	U Level of	Service B						
Analysis Period (min) 15												
Splits and Phases: 4: 473 E	E of Page & Ir	nes										
	<u> </u>								04			
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻሻ	**	1	N	**	1	X	**	1	X	**	1
Traffic Volume (vph)	111	348	23	24	1200	149	203	259	44	68	100	319
Future Volume (vph)	111	348	23	24	1200	149	203	259	44	68	100	319
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	/0.0		I	10 0			10.0		I	20.0		1
Lane Litil Factor	0.0	0.05	1 00	1 00	0.05	1 00	1 00	0.05	1 00	1 00	0.05	1 00
Ped Bike Factor	1.00	0.55	0.06	0.08	0.55	0.07	0.00	0.55	0.04	0.07	0.55	0.08
Frt	1.00		0.50	0.30		0.57	0.33		0.94	0.37		0.50
Fit Protocted	0.050		0.000	0.050		0.000	0.050		0.000	0.050		0.000
Sata Elow (prot)	2005	21//	1/72	1570	2257	1500	1710	2257	1500	1670	2257	1520
Salu. Flow (plot)	2990	3144	1473	0.050	3337	1502	0.520	3357	1002	0.575	3357	1002
	0.900	2444	1440	0.950	2257	1400	0.530	2257	1110	0.575	2257	1500
Sato. Flow (perm)	2980	3144	1410	1547	3357	1402	949	3357	1413 Vaa	903	3357	1500
Right Turn on Red			Yes			Yes			res			Yes
Sato. Flow (RTOR)		00	143		00	143		50	82		50	154
Link Speed (k/n)		60			60			50			50	
Link Distance (m)		264.5			491.4			387.7			301.9	
I ravel I ime (s)	•	15.9			29.5	•	•	27.9			21.7	
Confl. Peds. (#/hr)	6		14	14		6	6		32	32		6
Confl. Bikes (#/hr)						6						
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%	10%	5%	10%	3%	3%	1%	3%	3%	3%	3%	1%
Adj. Flow (vph)	123	387	26	27	1333	166	226	288	49	76	111	354
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	387	26	27	1333	166	226	288	49	76	111	354
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		9.0			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
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)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+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)	0.0	87.5	0.0	0.0	87.5	0.0	0.0	87.5	0.0	0.0	87.5	0.0
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (c)		0.0			0.0			0.0			0.0	
	Drot		Perm	Prot		Perm	nm±nt		Perm	Perm		Porm
Protected Phases	FIUL	NA 2	i eiiii	1	E C	i eiiii	pin+pi 2	N/۹.	i eiiii		11/4	i eiili
Pormitted Phases	5	2	0		0	C	0	0	0	Α	4	A
Petroter Dhees	F	0	2	4	6	Ö	ð	0	Ŏ	4	4	4
Delector Phase	5	2	2	T	0	0	3	ð	ŏ	4	4	4

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Synchro 10 Report

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	13.0	65.0	65.0	13.0	65.0	65.0	19.0	52.0	52.0	33.0	33.0	33.0
Total Split (%)	10.0%	50.0%	50.0%	10.0%	50.0%	50.0%	14.6%	40.0%	40.0%	25.4%	25.4%	25.4%
Maximum Green (s)	6.4	58.8	58.8	6.8	58.8	58.8	12.3	45.3	45.3	26.3	26.3	26.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			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	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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		14	14		6	6		32	32	6	6	6
Act Effct Green (s)	7.4	66.9	66.9	6.5	60.8	60.8	42.4	42.4	42.4	23.4	23.4	23.4
Actuated g/C Ratio	0.06	0.51	0.51	0.05	0.47	0.47	0.33	0.33	0.33	0.18	0.18	0.18
v/c Ratio	0.73	0.24	0.03	0.35	0.85	0.22	0.59	0.26	0.10	0.43	0.18	0.89
Control Delay	84.3	19.7	0.1	71.8	37.6	5.5	40.7	32.4	2.0	54.3	44.8	54.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.3	19.7	0.1	71.8	37.6	5.5	40.7	32.4	2.0	54.3	44.8	54.1
LOS	F	В	А	E	D	А	D	С	А	D	D	D
Approach Delay		33.6			34.7			33.1			52.3	
Approach LOS		С			С			С			D	
Queue Length 50th (m)	15.1	29.4	0.0	6.3	147.5	3.0	39.9	25.3	0.0	15.6	11.4	47.4
Queue Length 95th (m)	#31.1	39.7	0.0	15.5	177.6	14.6	60.2	35.7	2.6	30.0	19.2	#92.7
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	169	1619	798	82	1569	759	381	1169	545	198	679	426
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.24	0.03	0.33	0.85	0.22	0.59	0.25	0.09	0.38	0.16	0.83
Intersection Summary												
	Othor											
Cycle Length: 130	Other											
Actuated Cycle Length: 130												
Offect: 00 (76%) Reference	d to phase 2.E	BT and 6.1	NRT Start	of Green								
Natural Cycle: 105	u to priase 2.L	DT and 0.	WDT, Start	OI GIEEII								
Control Type: Actuated Coor	dinated											
Maximum v/c Ratio: 0.89	unated											
Intersection Signal Delay: 37	2			Ir	tersection							
Intersection Canacity Utilizat	.2 ion 86.4%			10		f Service I	E					
Analysis Period (min) 15	1011 00.4 /0			I.			<u> </u>					
# 95th percentile volume ex	vceeds canaci	ity queue i	may be lon	aer								
Queue shown is maximur	n after two cvo	cles.		901.								
Splits and Phases: 1: Orle	ans & Innes						20	6	1			1
	1						1 02		100			

 Ø1
 Ø2 (R)
 Ø3
 Ø4

 13s
 65s
 19s
 33s

 Ø5
 Ø6 (R)
 Ø8

 13s
 65s
 52s

Lane Group EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR Lane Configurations 1
Lane Configurations Image: Configurations <
Traffic Volume (vph) 579 1400 158 58 533 114 64 225 84 165 241 203 Future Volume (vph) 579 1400 158 58 533 114 64 225 84 165 241 203 Ideal Flow (vphpl) 1800
Future Volume (vph) 579 1400 158 58 533 114 64 225 84 165 241 203 Ideal Flow (vphpl) 1800 100 100
Ideal Flow (vphpl) 1800
Index How (ppp) Hose
Storage Lanes 2 1 <
Taper Length (m) 40.0 40.0 10.0 20.0 Lane Util. Factor 0.97 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 0.95 1.00 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 0.95 0.97 0.99 0.97 0.98 0.97 Ped Bike Factor 0.950 0.850 0.850 0.850 0.850 0.850 0.850 0.850 0.850 0.950 <t< td=""></t<>
Lane Util. Factor 0.97 0.95 1.00 1.00 0.95 1.00 0.95 1.00 0.95 0.95 0.95 0.950 0.850 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.950 </td
Lane Out. Factor 0.93 1.00 1.00 0.00 1.00 0.00 1.00
Fit 0.850 0
Fit Disso Disso <thdisso< th=""> <thdis< th=""> <thdis< th=""> <thdis< th=""></thdis<></thdis<></thdis<></thdisso<>
Satd. Flow (prot) 3288 3357 1532 1712 3293 1517 1712 3390 1532 1712 3390 1532 Flt Permitted 0.950 0.950 0.447 0.597 0.597 Satd. Flow (perm) 3261 3357 1456 1705 3293 1477 796 3390 1479 1058 3390 1485 Right Turn on Red Yes Yes Yes Yes Yes Yes Yes Yes Yes Satd. Flow (RTOR) 159 226 Link Speed (k/h) 60 60 50 50 50 50 50 159 226 Link Distance (m) 264.5 491.4 387.7 301.9 301.9 15.9 21.7 Confl. Peds. (#/hr) 7 22 22 7 15 18 18 15 Confl. Peds. (#/hr) 7 22 22 7 15 18 18 15
Sate How (pibly) 3266 3537 1332 1712 3293 1317 1712 3390 1332 1712 3390 1485 1485 1485 1485 1485 1485 151 161 161 165 161 161 161 161 161 161 161 161 161 161 <th171< th=""> 161 161</th171<>
Prit Perintied 0.550 0.530 0.447 0.597 Satd. Flow (perm) 3261 3357 1456 1705 3293 1477 796 3390 1479 1058 3390 1485 Right Turn on Red Yes Yes Yes Yes Yes Yes Yes Satd. Flow (RTOR) 165 230 159 226 Link Speed (k/h) 60 60 50 50 Link Distance (m) 264.5 491.4 387.7 301.9 Travel Time (s) 15.9 29.5 27.9 21.7 Confl. Peds. (#/hr) 7 22 22 7 15 18 18 15 Confl. Bikes (#/hr) 4 3 3 15 15 16 15
Sature Provide (perm) 3261 3357 1456 1705 3293 1477 796 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1479 1058 3390 1465 Yes
Right full off Red res
Sate: Flow (RTOR) 165 230 159 220 Link Speed (k/h) 60 60 50 50 Link Distance (m) 264.5 491.4 387.7 301.9 Travel Time (s) 15.9 29.5 27.9 21.7 Confl. Peds. (#/hr) 7 22 22 7 15 18 18 15 Confl. Bikes (#/hr) 4 3 3 3 3 3
Link Speed (k/n) 60 60 50 50 Link Distance (m) 264.5 491.4 387.7 301.9 Travel Time (s) 15.9 29.5 27.9 21.7 Confl. Peds. (#/hr) 7 22 22 7 15 18 18 15 Confl. Bikes (#/hr) 4 3 3 3 3 3
Link Distance (m) 264.5 491.4 387.7 301.9 Travel Time (s) 15.9 29.5 27.9 21.7 Confl. Peds. (#/hr) 7 22 22 7 15 18 18 15 Confl. Bikes (#/hr) 4 3 3 3 3 3
Travel Time (s) 15.9 29.5 27.9 21.7 Confl. Peds. (#/hr) 7 22 22 7 15 18 18 15 Confl. Bikes (#/hr) 4 3 3 3 3 3
Confl. Peds. (#/hr) 7 22 22 7 15 18 18 15 Confl. Bikes (#/hr) 4 3
Contl. Bikes (#/hr) 4 3
Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9
Heavy Vehicles (%) 2% 3% 1% 1% 5% 2% 1% 2% 1% 1% 2% 1%
Adj. Flow (vph) 643 1556 176 64 592 127 71 250 93 183 268 226
Shared Lane Traffic (%)
Lane Group Flow (vph) 643 1556 176 64 592 127 71 250 93 183 268 226
Enter Blocked Intersection No
Lane Alignment L NA Left R NA
Median Width(m) 9.0 7.4 6.0 6.0
Link Offset(m) 0.0 0.0 0.0 0.0
Crosswalk Width(m) 5.0 5.0 5.0 5.0
Two way Left Turn Lane
Headway Factor 1.06
Turning Speed (k/h) 24 14 24 14 24 14 24 14
Number of Detectors 1 2 1
Detector Template Left Thru Right Left Thru Right Left Thru Right Left Thru Right
Leading Detector (m) 18.6 93.0 18.6 18.6 93.0 18.6 18.6 93.0 18.6 18.6 93.0 18.6 18.6 93.0 18.6
Trailing Detector (m) 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
Detector 1 Size(m) 18.6 5.5 18.6 18.6 5.5 18.6 18.6 5.5 18.6 18.6 5.5 18.6
Detector 1 Type CI+Ex CI
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.
Detector 1 Queue (s) 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.
Detector 2 Position(m) 87.5 87.5 87.5 87.5
Detector 2 Size(m) 5.5 5.5 5.5 5.5
Detector 2 Type CI+Ex CI+Ex CI+Ex CI+Ex
Detector 2 Channel
Detector 2 Extend (s) 0.0 0.0 0.0 0.0
Turn Type Prot NA Perm Prot NA Perm pm+pt NA Perm Perm NA Perm
Protected Phases 5 2 1 6 3 8 4
Permitted Phases 2 6 8 8 4 4
Detector Phase 5 2 2 1 6 6 3 8 8 4 4 4

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Synchro 10 Report

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Lane Group	FBI	FBT	FBR	WBI	WBT	WBR	NBI	NBT	NBR	SBI	SBT	SBR
Switch Phase			LBIX	1122					- HBR	002		0011
Minimum Initial (s)	50	10.0	10.0	50	10.0	10.0	50	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	31.0	49.0	49.0	16.0	34.0	34.0	12.0	45.0	45.0	33.0	33.0	33.0
Total Split (%)	28.2%	44.5%	44.5%	14.5%	30.9%	30.9%	10.9%	40.9%	40.9%	30.0%	30.0%	30.0%
Maximum Green (s)	24.4	42.8	42.8	9.8	27.8	27.8	5.3	38.3	38.3	26.3	26.3	26.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			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	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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		22	22		7	7		32	32	15	15	15
Act Effct Green (s)	23.9	51.0	51.0	8.6	32.9	32.9	33.7	33.7	33.7	24.1	24.1	24.1
Actuated g/C Ratio	0.22	0.46	0.46	0.08	0.30	0.30	0.31	0.31	0.31	0.22	0.22	0.22
v/c Ratio	0.90	1.00	0.23	0.48	0.60	0.21	0.25	0.24	0.17	0.79	0.36	0.45
Control Delay	58.9	55.6	4.9	56.3	47.0	10.0	27.3	27.9	0.9	64.6	37.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	55.6	4.9	56.3	47.0	10.0	27.3	27.9	0.9	64.6	37.3	7.6
LOS	E	E	А	E	D	В	С	С	А	E	D	А
Approach Delay		52.7			41.8			21.8			34.8	
Approach LOS		D			D			С			С	
Queue Length 50th (m)	63.8	~195.0	1.3	12.5	44.9	0.0	9.5	18.1	0.0	33.5	23.1	0.0
Queue Length 95th (m)	#91.2	#234.6	13.6	26.3	82.3	21.8	18.7	27.0	0.9	#62.9	34.0	16.9
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	732	1557	763	152	985	603	288	1180	618	252	810	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	1.00	0.23	0.42	0.60	0.21	0.25	0.21	0.15	0.73	0.33	0.43
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length: 110				_								
Offset: 0 (0%), Referenced to p	hase 2:EBT	and 6:WE	BT, Start of	Green								
Natural Cycle: 115												
Control Type: Actuated-Coordin	nated											
Maximum v/c Ratio: 1.00												
Intersection Signal Delay: 44.8 Intersection LOS: D												
Intersection Capacity Utilization	n 90.5%			IC	CU Level o	f Service E						
Analysis Period (min) 15												
 Volume exceeds capacity, 	queue is the	oretically i	nfinite.									
Queue shown is maximum a	after two cyc	cles.										
# 95th percentile volume exc	eeds capaci	ty, queue r	may be lon	ger.								
Queue shown is maximum a	atter two cyc	cles.										
Splits and Phases: 1: Orlean	s & Innes											

1 Ø1	→ 102 (R)	1	Ø3 Ø4
16 s	49 s	12s	33 s
≯ _{øs}	• *	5 (R)	Ø8
31 s	34 s	45 s	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	X	≜1 ⊾		× 1	A 12			4			4	
Traffic Volume (vph)	61	1400	30	93	600	64	23	6	77	53	17	34
Future Volume (vph)	61	1400	30	93	600	64	23	6	77	53	17	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0.0
Taper Length (m)	35.0			0.0		Ŭ	2.5		•	2.5		
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	0.00	1.00	1 00	0.00	1.00	0.98	1.00	1.00	0.99	1.00
Frt	1.00	0.997		1.00	0.986			0.902			0.956	
Elt Protected	0.950	0.001		0.950	0.000			0.989			0.975	
Satd Flow (prot)	1695	3375	0	1695	3245	0	0	1542	0	0	1579	0
Elt Permitted	0.359	0010	Ū	0 114	0210	Ū	Ū	0.917	U	Ū	0 765	U
Satd Flow (perm)	637	3375	0	203	3245	0	0	1428	0	0	1232	0
Right Turn on Red	001	0010	Yes	200	0240	Yes	U	1720	Yes	0	1202	Yes
Satd Flow (RTOR)		3	100		18	100		32	100		22	100
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		191 /			236.7			212.5			273 /	
Travel Time (s)		20.5			1/ 2			212.J 10.1			213.4	
Confl Peds (#/br)	Q	23.5	5	5	14.2	٩	5	13.1	13	13	24.0	5
Confl. Pikos (#/hr)	3		1	J		J	J		1	IJ		J
Book Hour Easter	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Vehicles (%)	0.90	0.90	6%	0.90	0.90 5%	0.90	0.90 5%	10/	30/	6%	0.90	11%
Adi Elow (vob)	Z /0	2 /0 1556	070	2 /0 102	570	Z /0 71	J /0	1/0	0 /0 0 C	0 /0 50	1/0	11/0
Shared Lane Traffic (%)	00	1550	33	105	007	11	20	1	00	09	19	30
Long Croup Flow (upb)	69	1590	٥	102	720	٥	٥	110	٥	٥	116	٥
Enter Blocked Interpaction	No	1009 No	No	No	7.30 No	No	No	No	No	No	No	U No
Long Alignment	INU	INO	Diabt	INU	INU	N0 Diabt		INU			INO	
Lane Alignment	Leit	Leit	Right	Leit	2.7	Right	LINA	Leit	K NA	LINA	Leit	RINA
link Offeet(m)		5.0			3.7			0.0			0.0	
		10.0			10.0			0.0			0.0	
		10.0			10.0 Vee			5.0			J.U	
Headway Faster	1.06	1.06	1.06	1.06	1.06	1.00	1.06	1.06	1.06	1.06	1.06	1.06
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/n)	24	0	14	24	0	14	24	0	14	24	0	14
Number of Detectors	ا	Z		ا ا	Z		ا	Z		ا	Z	
Leading Data star (m)	Len			Len			Len			Len	I nru	
Leading Detector (m)	10.0	93.0		18.0	93.0		10.0	93.0		10.0	93.0	
Trailing Detector (m)	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		10.0	0.0		0.0	0.0	
Detector 1 Size(m)		0.0 01. Ev			0.0 CL Ev			0.5			0.5	
Detector 1 Type	CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX	
Detector 1 Channel	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Extend (s)	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	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel		~ ~			~ ~			~ ~			~ ~	
Detector 2 Extend (s)	_	0.0		-	0.0		-	0.0		F	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	_	2			6		_	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

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Synchro 10 Report

2: Page & Innes PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	39.2	39.2		39.2	39.2		37.8	37.8		37.8	37.8	
Total Split (s)	72.0	72.0		72.0	72.0		38.0	38.0		38.0	38.0	
Total Split (%)	65.5%	65.5%		65.5%	65.5%		34.5%	34.5%		34.5%	34.5%	
Maximum Green (s)	65.8	65.8		65.8	65.8		31.2	31.2		31.2	31.2	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2			6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	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		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	5	5		9	9		13	13		5	5	
Act Effct Green (s)	77.8	77.8		77.8	77.8			19.2			19.2	
Actuated g/C Ratio	0.71	0.71		0.71	0.71			0.17			0.17	
v/c Ratio	0.15	0.67		0.72	0.32			0.43			0.50	
Control Delay	2.6	4.9		52.7	11.5			31.5			37.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	2.6	4.9		52.7	11.5			31.5			37.8	
LOS	А	А		D	В			С			D	
Approach Delay		4.8			16.5			31.5			37.8	
Approach LOS		А			В			С			D	
Queue Length 50th (m)	1.2	18.6		8.2	19.4			16.3			18.0	
Queue Length 95th (m)	m1.9	m21.8		#46.9	82.0			27.3			28.9	
Internal Link Dist (m)		467.4			212.7			188.5			249.4	
Turn Bay Length (m)	100.0			100.0								
Base Capacity (vph)	450	2386		143	2299			427			365	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.15	0.67		0.72	0.32			0.28			0.32	
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 2 (2%), Referenced to	phase 2:EBT	L and 6:W	BTL, Start o	of Green								
Natural Cycle: 120												
Control Type: Actuated-Coord	inated											
Maximum v/c Ratio: 0.72												
Intersection Signal Delay: 11.0)			In	tersection	LOS: B						
Intersection Capacity Utilizatio	n 81.2%			IC	CU Level of	Service D						
Analysis Period (min) 15												
# 95th percentile volume exc	ceeds capaci	ty, queue n	nay be long	jer.								
Queue shown is maximum	Queue shown is maximum after two cycles.											

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Page & Innes

, ♣ø2 (R)	₩Ø4					
72 s	38 s					
🗸 🖉 Ø6 (R)	≤ ¶ _{Ø8}					
72 s	38 s					
	-	\mathbf{r}	1	+	1	1
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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	≜t ≽		5	**	W.	
Traffic Volume (vph)	1400	61	45	800	60	39
Future Volume (vph)	1400	61	45	800	60	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	30.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		20.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.994				0.947	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	3337	0	1679	3357	1623	0
Flt Permitted			0.950		0.970	
Satd. Flow (perm)	3337	0	1679	3357	1623	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	236.7			238.7	204.5	
Travel Time (s)	14.2			14.3	14.7	
Confl. Peds. (#/hr)		6	6			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1556	68	50	889	67	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1624	0	50	889	110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	L NA	R NA
Median Width(m)	3.7	•		3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	9.0			9.0	9.0	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization	on 55.6%			IC	U Level of	Service B
Analysis Period (min) 15						

4: 473 E of Page & Innes PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	A 12		Υ.	≜1 5			ا	1		4	
Traffic Volume (vph)	8	1587	1	2	824	8	2	0	8	4	0	10
Future Volume (vph)	8	1587	1	2	824	8	2	0	8	4	0	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	20.0			30.0			20.0			20.0		
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	
Frt					0.999				0.850		0.901	
Flt Protected	0.950			0.950				0.950			0.987	
Satd, Flow (prot)	1712	3390	0	1712	3323	0	0	1712	1381	0	1584	0
Flt Permitted	0.305		-	0.111		-	-	0.748		-	0.908	-
Satd, Flow (perm)	550	3390	0	200	3323	0	0	1343	1381	0	1457	0
Right Turn on Red			Yes			Yes	-		Yes	-		Yes
Satd, Flow (RTOR)					2				31		31	
Link Speed (k/h)		60			60			40	•.		40	
Link Distance (m)		238 7			292.8			151.9			62.6	
Travel Time (s)		14.3			17.6			13.7			5.6	
Confl Peds (#/hr)		11.0	2	2	17.0		3	10.1			0.0	3
Confl Bikes (#/hr)			1	2			Ū					Ū
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 (%)	1%	2%	1%	1%	4%	1%	1%	1%	12%	1%	1%	1%
Adi Flow (vph)	1 <i>7</i> 0	1763	1/0	2	916	1 <i>7</i> 0	2	1 /0	1 <u>2</u> /0	170	0	11
Shared Lane Traffic (%)	5	1700		2	510	5	2	U	5	-	0	
Lane Group Flow (vph)	9	1764	0	2	925	0	0	2	9	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
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)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane		Yes										
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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0	18.6	18.6	93.0	
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)	18.6	5.5		18.6	5.5		18.6	5.5	18.6	18.6	5.5	
Detector 1 Type	CI+Ex	Cl+Ex		Cl+Ex	CI+Ex		CI+Ex	Cl+Ex	CI+Ex	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8	-	8	4		
Detector Phase	2	2		6	6		8	8	8	4	4	

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4: 473 E of Page & Innes PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	77.0	77.0		77.0	77.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	70.0%	70.0%		70.0%	70.0%		30.0%	30.0%	30.0%	30.0%	30.0%	
Maximum Green (s)	70.9	70.9		70.9	70.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Lime (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/nr)	2	2		1	1		1	1	1	3	3	
Act Effect Green (S)	97.8	97.8		97.8	97.8			13.2	13.2		13.2	
Actuated g/C Ratio	0.89	0.89		0.89	0.89			0.12	0.12		0.12	
V/C Rallo	1.02	0.59		0.01	0.31			20.01	0.05		0.07	
	1.0	2.7		0.0	0.0			30.0	0.5		0.1	
Total Delay	0.0	0.0		5.0	0.0			38.0	0.0		0.0 5.1	
	١.0	Δ.1		J.U A	J.J A			ט.ט ח	0.5		J.1 A	
Approach Delay	~	27		~	35			73	~		51	
Approach LOS		Δ			Δ			Α			Δ	
Queue Length 50th (m)	0.0	0.0		0.0	0.0			0.4	0.0		0.0	
Queue Length 95th (m)	m0.3	44.4		1.0	53.7			22	0.3		2.3	
Internal Link Dist (m)		214.7		1.0	268.8			127.9	0.0		38.6	
Turn Bay Length (m)	30.0			40.0							0010	
Base Capacity (vph)	489	3015		178	2956			325	358		377	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.02	0.59		0.01	0.31			0.01	0.03		0.04	
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 36 (33%), Referenced	to phase 2:E	BTL and 6:	WBTL, St	art of Gree	en							
Natural Cycle: 90												
Control Type: Actuated-Coorc	linated											
Maximum v/c Ratio: 0.59												
Intersection Signal Delay: 3.0				In	tersection	LOS: A						
Intersection Capacity Utilization	on 79.9%			IC	CU Level of	Service D						
Analysis Period (min) 15												

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 473 E of Page & Innes



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	55	**	1	5	**	1	*	**	1	K	**	1
Traffic Volume (vph)	579	1260	158	58	533	114	64	225	84	165	241	203
Future Volume (vph)	579	1260	158	58	533	114	64	225	84	165	241	203
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0			40.0		•	10.0		I.	20.0		
Lane Litil Factor	0.07	0.95	1 00	1 00	0.95	1 00	1 00	0 95	1 00	1 00	0 95	1 00
Ped Bike Factor	0.07	0.00	0.95	0.99	0.00	0.97	0.99	0.00	0.97	0.98	0.00	0.97
Frt	0.00		0.850	0.00		0.850	0.00		0.850	0.00		0.850
Fit Protected	0 950		0.000	0 950		0.000	0 950		0.000	0 950		0.000
Satd Flow (prot)	3288	3357	1532	1712	3293	1517	1712	3390	1532	1712	3390	1532
Elt Permitted	0 950	0001	1002	0.950	0200	1017	0 //7	0000	1002	0 597	0000	1002
Satd Flow (perm)	3261	3357	1/156	1703	3203	1/177	796	3300	1/170	1058	3300	1/85
Right Turn on Red	5201	0001	Ves	1700	0200	Ves	150	0000	Ves	1000	0000	Ves
Satd Flow (RTOR)			165			230			150			226
Link Speed (k/b)		60	100		60	200		50	100		50	220
Link Distance (m)		264.5			101 /			397.7			301.0	
Travel Time (c)		204.0			20.5			27.0			21.7	
Confl Dode (#/br)	7	15.9	າງ	າງ	29.0	7	15	21.9	10	10	21.7	15
Confl. Pikos (#/hr)	1		22	22		2	10		10	10		10
Coniii. Dikes (#/1ii)	0.00	0.00	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.90	0.90	10/	10/	0.90	0.90	10/	0.90	0.90	10/	0.90	10/
Adi, Flow (uph)	Z%	3%	170	64	5% 500	2% 107	170	2%	1%	100	2%	170
Auj. Flow (vpli)	043	1400	1/0	04	09Z	127	11	200	90	100	200	220
	642	1400	176	64	500	107	71	250	02	100	060	226
Lane Group Flow (vpn)	043	1400	1/0	04 No	59Z	IZ/	/	250	93	103	208	220
Enter Blocked Intersection		INO			INO			INO			INO	
Lane Alignment	L NA	Len	RINA	LINA	Len	RINA	LINA	Len	RINA	LINA	Len	RINA
Viedian VVidtn(m)		9.0			7.4			0.0			0.0	
		0.0			0.0			0.0			0.0	
		5.0			5.0			5.0			5.0	
	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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/n)	24	0	14	24	0	14	24	0	14	24	0	14
Number of Detectors	1	Z		1-4	Z		1.4	Z		1-4	Z	
Detector Template	Lett	Inru	Right	Len	I nru	Right	Lett	Inru	Right	Lett	Inru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	_		0.0	_		0.0	_	_	0.0	
Iurn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	31.0	49.0	49.0	16.0	34.0	34.0	12.0	45.0	45.0	33.0	33.0	33.0
Total Split (%)	28.2%	44.5%	44.5%	14.5%	30.9%	30.9%	10.9%	40.9%	40.9%	30.0%	30.0%	30.0%
Maximum Green (s)	24.4	42.8	42.8	9.8	27.8	27.8	5.3	38.3	38.3	26.3	26.3	26.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			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	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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		22	22		7	7		32	32	15	15	15
Act Effct Green (s)	23.9	51.0	51.0	8.6	32.9	32.9	33.7	33.7	33.7	24.1	24.1	24.1
Actuated g/C Ratio	0.22	0.46	0.46	0.08	0.30	0.30	0.31	0.31	0.31	0.22	0.22	0.22
v/c Ratio	0.90	0.90	0.23	0.48	0.60	0.21	0.25	0.24	0.17	0.79	0.36	0.45
Control Delay	58.9	39.7	4.9	56.3	47.0	10.0	27.3	27.9	0.9	64.6	37.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	39.7	4.9	56.3	47.0	10.0	27.3	27.9	0.9	64.6	37.3	7.6
LOS	E	D	А	E	D	В	С	С	А	E	D	A
Approach Delay		42.5			41.8			21.8			34.8	
Approach LOS		D			D			С			С	
Queue Length 50th (m)	63.8	~161.1	1.3	12.5	44.9	0.0	9.5	18.1	0.0	33.5	23.1	0.0
Queue Length 95th (m)	#91.2	#200.5	13.6	26.3	82.3	21.8	18.7	27.0	0.9	#62.9	34.0	16.9
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	732	1557	763	152	985	603	288	1180	618	252	810	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.90	0.23	0.42	0.60	0.21	0.25	0.21	0.15	0.73	0.33	0.43
Intersection Summary	Other											
Cycle Length: 110	Ourier											
Actuated Cycle Length: 110												
Offset: 0 (0%), Referenced to	phase 2:EBT	and 6:WE	BT, Start of	Green								
Natural Cycle: 105												
Control Type: Actuated-Coord	inated											
Maximum v/c Ratio: 0.90												
Intersection Signal Delay: 39.0)			In	tersection	LOS: D						
Intersection Capacity Utilization	on 86.4%			IC	CU Level o	f Service E						
Analysis Period (min) 15												
~ Volume exceeds capacity,	queue is the	oretically i	nfinite.									
Queue shown is maximum	after two cyc	les.										
# 95th percentile volume exe	ceeds capaci	ty, queue i	may be lon	ger.								
Queue shown is maximum	after two cyc	les.										
Splits and Phases: 1: Orlea	ns & Innes											

√ Ø1	₩Ø2 (R)		2523	1 Ø3	Ø4	
16 s	49.s			12.s	33 s	
▶ ø 5 ø 5 ø 5 ø 5 ø 5 ø 5 ø 5 ø 5 ø 5 ø		● Ø6 (R)		Ø8		
31 s		34 s		45 s		

APPENDIX J

Background Synchro Analysis

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l ane Group	FBI	FBT	FBR	WBI	WBT	WBR	NBI	NBT	NBR	SBI	SBT	SBR
Lane Configurations	**	**	1	*	**	1	*	**	1	×	**	1
Traffic Volume (vph)	125	455	24	27	1489	197	209	267	53	80	103	473
Future Volume (vph)	125	455	24	27	1489	197	200	267	53	80	103	473
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0		I	10 0			10.0			20.0		
Lane Litil Factor	-0.0 0 07	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1.00	1 00	0.95	1 00
Ped Bike Factor	1.00	0.55	0.06	0.00	0.55	0.07	0.00	0.55	0.04	0.07	0.55	0.08
Frt	1.00		0.50	0.99		0.57	0.55		0.54	0.37		0.50
Fit Protected	0.050		0.000	0.950		0.000	0.050		0.000	0.950		0.000
Satd Elow (prot)	2005	21//	1/72	1572	3357	1502	1710	3357	1502	1670	3357	1530
Satu. Flow (plot)	2995	5144	1475	0.050	5557	1002	0 5 4 9	5557	1002	0.597	5557	1002
Fit Fermilled	0.900	2111	1416	0.950	2257	1460	0.040	2257	1110	1002	2257	1500
Salu. Flow (perifi)	2907	5144	1410 Voo	1049	332 <i>1</i>	1402 Voo	901	3351	1415 Voo	1005	335 <i>1</i>	1500 Voo
Right Tulli on Reu			142			142			105			165
Salu. Flow (RTOR)		60	140		60	143		50	02		50	155
Link Speed (k/n)		00			401.4						00	
		204.5			491.4			387.7			301.9	
Carf Dada (#/br)	C	15.9	1 4	11	29.5	C	C	27.9	20	20	21.7	C
Confil. Peas. (#/nr)	6		14	14		6	0		32	32		6
Confil. Bikes (#/nr)	4 00	4 00	4 00	4 00	4 00	0	1.00	1 00	1 00	4 00	4 00	4.00
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 venicles (%)	12%	10%	5%	10%	3%	3%	1%	3%	3%	3%	3%	1%
Adj. Flow (vpn)	125	455	24	27	1489	197	209	267	53	80	103	473
Shared Lane Traffic (%)	405	455	04	07	4.400	407	000	0.07	50	00	400	470
Lane Group Flow (vpn)	125	455	24	27	1489	197	209	267	53	80	103	4/3
Enter Blocked Intersection	NO	No	No	No	No	No	NO	NO	NO	No	No	NO
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		9.0			7.4			6.0			6.0	
		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
I wo way Left I urn Lane							4.00					4.00
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	0	14	24	0	14	24	0	14	24	0	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)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	Cl+Ex	CI+Ex	Cl+Ex	CI+Ex	CI+Ex	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	13.0	65.0	65.0	13.0	65.0	65.0	19.0	52.0	52.0	33.0	33.0	33.0
Total Split (%)	10.0%	50.0%	50.0%	10.0%	50.0%	50.0%	14.6%	40.0%	40.0%	25.4%	25.4%	25.4%
Maximum Green (s)	6.4	58.8	58.8	6.8	58.8	58.8	12.3	45.3	45.3	26.3	26.3	26.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?		Ŭ	Ū		Ŭ	Ŭ				Ū		Ū
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		14	14		6	6		32	32	6	6	6
Act Effct Green (s)	6.4	64.0	64.0	6.5	58.8	58.8	45.3	45.3	45.3	26.5	26.5	26.5
Actuated g/C Ratio	0.05	0.49	0.49	0.05	0.45	0.45	0.35	0.35	0.35	0.20	0.20	0.20
v/c Ratio	0.85	0.29	0.03	0.35	0.98	0.27	0.51	0.23	0.10	0.39	0.15	1.10
Control Delay	103.8	21.2	0.1	71.9	54.2	7.6	36.7	30.6	2.5	51.6	43.3	106.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.8	21.2	0.1	71.9	54.2	7.6	36.7	30.6	2.5	51.6	43.3	106.5
LOS	F	С	А	E	D	А	D	С	А	D	D	F
Approach Delay		37.5			49.1			30.2			89.9	
Approach LOS		D			D			С			F	
Queue Length 50th (m)	15.3	35.5	0.0	6.3	178.5	7.1	36.4	23.3	0.0	16.5	10.6	~96.3
Queue Length 95th (m)	#31.9	47.0	0.0	15.5	#227.5	20.7	55.9	33.1	3.4	31.2	18.1	#157.0
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	147	1548	769	82	1518	739	411	1169	545	204	684	429
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.29	0.03	0.33	0.98	0.27	0.51	0.23	0.10	0.39	0.15	1.10
Intersection Summary	Othor											
Ared Type. Cycle Longth: 130	Other											
Actuated Cycle Length: 120												
Offset: 99 (76%), Referenced	to phase 2:E	BT and 6:	WBT, Start	of Green								
Natural Cycle: 115												
Control Type: Actuated-Coord	inated											
Maximum v/c Ratio: 1.10												
Intersection Signal Delay: 51.9				lr	ntersection	LOS: D						
Intersection Capacity Utilizatio	n 103.6%			IC	CU Level o	f Service G	ì					
Analysis Period (min) 15												
 Volume exceeds capacity, 	queue is the	eoretically i	nfinite.									
Queue shown is maximum	after two cyc	cles.										
# 95th percentile volume exc	ceeds capaci	ty, queue i	may be lon	ger.								
Queue shown is maximum	after two cyc	cles.										
Splits and Phases: 1: Orlean	ns & Innes											

√ Ø1	₩ Ø2 (R)	1 ø3	Ø4
13 s	65 s	19 s	33 s
∕ ø₅	 Ø6 (R)	▲ Ø8	
13 s	65 s	52 s	

	≯	→	\mathbf{F}	4	┥	*	•	Ť	*	1	ŧ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	≜1 6		1	≜ 16			4			4	
Traffic Volume (vph)	12	520	21	37	1521	20	14	12	38	34	9	43
Future Volume (vph)	12	520	21	37	1521	20	14	12	38	34	9	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	35.0			25.0			2.5			2.5		
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			0.99			0.99	
Frt		0.994			0.998			0.920			0.932	
Flt Protected	0.950			0.950				0.989			0.981	
Satd. Flow (prot)	1586	3126	0	1503	3349	0	0	1568	0	0	1596	0
Flt Permitted	0.130			0.450				0.922			0.851	
Satd. Flow (perm)	217	3126	0	708	3349	0	0	1458	0	0	1384	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			2			38			41	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		491.4			236.7			212.5			273.4	
Travel Time (s)		29.5			14.2			19.1			24.6	
Confl. Peds. (#/hr)	4		7	7		4	11					11
Confl. Bikes (#/hr)			1						1			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 (%)	9%	10%	5%	15%	3%	5%	1%	15%	3%	1%	10%	3%
Adj. Flow (vph)	12	520	21	37	1521	20	14	12	38	34	9	43
Shared Lane Traffic (%)												-
Lane Group Flow (vph)	12	541	0	37	1541	0	0	64	0	0	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		5.0	-		5.0	-		0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		10.0			10.0			5.0			5.0	
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	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	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	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	CI+Ex	CI+Ex		Cl+Ex	CI+Ex		Cl+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	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	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

2: Page & Innes AM Peak Hour

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	-	_	•	•		-	1		1	-	•	•
Lane Group	EBL	EBI	EBR	WBL	WBI	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase	(0.0	10.0			10.0		10.0					
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	39.2	39.2		39.2	39.2		37.8	37.8		37.8	37.8	
Total Split (s)	82.0	82.0		82.0	82.0		38.0	38.0		38.0	38.0	
Total Split (%)	08.3%	08.3%		68.3%	08.3%		31.7%	31.7%		31.7%	31.7%	
Maximum Green (s)	/5.8	/5.8		/5.8	/5.8		31.2	31.2		31.2	31.2	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (S)	2.5	2.5		2.5	2.5		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
	0.2	0.2		0.2	0.2			0.0			0.0	
Leau/Lag												
Leau-Lag Optimize?	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Venicle Extension (S)	C Mox	S.U C. Mox		C Mox	S.U C. Mox		J.U Nono	J.U Nono		S.U Nono	J.U Nono	
Walk Time (s)	0-iviax 15.0	15 0		15 0	15 0							
Flach Dont Walk (c)	19.0	19.0		19.0	19.0		24.0	24.0		24.0	24.0	
Padastrian Calls (#/br)	10.0	10.0		10.0	10.0		24.0	24.0		24.0	24.0	
Act Effet Green (s)	88.6	1 88.6		88.6	88.6		1	18 /		11	18 /	
Actuated a/C Patio	00.0	00.0		0.0	00.0			0.15			0.15	
v/c Ratio	0.74	0.74		0.74	0.74			0.15			0.15	
Control Delay	8.9	6.5		1 1	24			21.2			26.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	8.9	6.5		11	24			21.2			26.5	
LOS	A	A		Α	Δ.1			C			20.0 C	
Approach Delay		6.5			2.3			21.2			26.5	
Approach LOS		A			A			С			С	
Queue Length 50th (m)	0.4	11.2		0.9	20.4			5.4			9.4	
Queue Length 95th (m)	3.5	33.2		m0.6	19.7			14.4			19.8	
Internal Link Dist (m)		467.4			212.7			188.5			249.4	
Turn Bay Length (m)	100.0			100.0								
Base Capacity (vph)	160	2310		522	2473			407			390	
Starvation Cap Reductn	0	0		0	25			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.07	0.23		0.07	0.63			0.16			0.22	
Intersection Summary												
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 26 (22%), Referenced	to phase 2:E	BTL and 6:	WBTL, Sta	art of Gree	en							
Natural Cycle: 90												
Control Type: Actuated-Coord	linated											
Maximum v/c Ratio: 0.62												
Intersection Signal Delay: 4.8	70.00/			In	tersection	LUS: A						
Intersection Capacity Utilization	on 70.6%			IC	U Level of	Service C						
Analysis Period (min) 15		- 41 -1		:								
m volume for 95th percentile	e queue is m	etered by u	pstream s	ignal.								

Splits and Phases: 2: Page & Innes



	-	\rightarrow	-	-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Lane Configurations	* *	1	5	**	ň	1	
Traffic Volume (vph)	556	68	52	1358	164	64	
Future Volume (vph)	556	68	52	1358	164	64	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		50.0	65.0		70.0	70.0	
Storage Lanes		1	1		1	0	
Taper Length (m)			80.0		20.0		
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Ped Bike Factor		0.95	0.99				
Frt		0.850	0.00			0.850	
Flt Protected		0.000	0.950		0.950		
Satd Flow (prot)	3357	1502	1679	3357	1679	1502	
Elt Permitted	0001	1002	0 432	0001	0.950	1002	
Satd Flow (perm)	3357	1433	755	3357	1679	1502	
Right Turn on Red	0001	Yes	100	0001	1075	Yes	
Satd Flow (RTOR)		68				64	
Link Sneed (k/h)	60	00		60	50	T	
Link Distance (m)	236.7			228.7	204.5		
	230.7			230.7	204.5		
Confl Pade (#/br)	14.Z	11	11	14.3	14.7		
Dook Hour Foster	1.00	1 00	1.00	1 00	1.00	1.00	
	1.00	1.00	1.00	1250	1.00	1.00	
Adj. Flow (vpri)	000	00	JΖ	1000	104	04	
Shared Lane Traffic (%)	FFC	00	50	1050	104	64	
Lane Group Flow (vpn)	550	68 No	52	1358	164	64 No	
Enter Blocked Intersection	INO	N0 Dialat	INO	INO			
	Left	Right	Leπ	Leπ		R NA	
Median Width(m)	5.0			5.0	3.7		
	0.0			0.0	0.0		
Crosswalk Width(m)	9.0			9.0	9.0		
I wo way Left I urn Lane	4.00						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	
Turning Speed (k/h)	_	14	24	-	24	14	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6	
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)	5.5	18.6	18.6	5.5	18.6	18.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+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)	87.5			87.5			
Detector 2 Size(m)	5.5			5.5			
Detector 2 Type	CI+Ex			CI+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			6	4		3
Permitted Phases	-	2	6	-		8	
Detector Phase	2	2	6	6	4	8	
Switch Phase	-	_	Ť			v	
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	30
	10.0	10.0	10.0	10.0	0.0	10.0	0.0

	-	\rightarrow	-	-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Minimum Split (s)	31.2	31.2	31.2	31.2	11.3	37.3	30.0
Total Split (s)	73.0	73.0	73.0	73.0	17.0	47.0	30.0
Total Split (%)	60.8%	60.8%	60.8%	60.8%	14.2%	39.2%	25%
Maximum Green (s)	66.8	66.8	66.8	66.8	10.7	40.7	28.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	2.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.0	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.3	6.3	
Lead/Lag	•	•	•	•	Lag		Lead
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0			21.0
Pedestrian Calls (#/hr)	10	10	10	10			10
Act Effct Green (s)	78.8	78.8	78.8	78.8	16.7	28.7	
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.14	0.24	
v/c Ratio	0.25	0.07	0.11	0.62	0.70	0.16	
Control Delay	8.2	1.8	62	10.9	67.5	7.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.2	1.8	6.0	10.9	67.5	7.5	
	A	A	<u>م. د</u>	B	F	A	
Approach Delay	7.5			10.8	50.6		
Approach LOS	Α			R	00.0 D		
Queue Length 50th (m)	16.0	0.0	16	22.0	33 1	0.0	
Queue Length 95th (m)	26.8	2.4	m4 1	140.4	#79.5	8.6	
Internal Link Dist (m)	212.7	2.1		214.7	180.5	0.0	
Turn Bay Length (m)	212.1	50.0	65.0	211.7	70.0	70.0	
Base Capacity (vph)	2203	963	495	2203	233	551	
Starvation Can Reductn	0	000	0	0	0	0	
Spillback Can Reductn	0	0	0	0	0	0	
Storage Can Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.25	0.07	0 11	0.62	0.70	0 12	
	0.20	0.07	0.11	0.02	0.10	0.12	
Intersection Summary	Other						
Area Type:	Uther						
Cycle Length: 120							
Actuated Cycle Length: 120							
Offset: 20 (17%), Referenced t	to phase 2:E	BT and 6:V	VBTL, Sta	rt of Green	l		
Natural Cycle: 90							
Control Type: Actuated-Coordi	inated						
Maximum v/c Ratio: 0.70							
Intersection Signal Delay: 13.9)			In	tersection	LOS: B	
Intersection Capacity Utilization	n 59.6%			IC	U Level o	t Service B	
Analysis Period (min) 15							
# 95th percentile volume exc	ceeds capaci	ty, queue r	nay be lon	ger.			
Queue shown is maximum	after two cyc	les.					
m Volume for 95th percentile	e queue is me	etered by ι	ipstream s	ignal.			

Splits and Phases: 3: Lamarche & Innes

	Ĵŧ k ø₃	▲ Ø4
73 s	30 s	17 s
₩ Ø6 (R)	1Ø8	
73 s	47 s	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	8	A 1.		*	≜1 ⊾				1		4	
Traffic Volume (vph)	6	513	38	12	1405	4	99	0	39	1	0	3
Future Volume (vph)	6	513	38	12	1405	4	90	0	39	1	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0	1000	0.0	1000	1000	0.0	0.0	1000	0.0	0.0	1000	0.0
Storage Lanes	00.0		0.0	+0.0 1		0.0	0.0		0.0	0.0		0.0
Tapor Longth (m)	80.0		0	30.0		0	20.0		1	20.0		U
	1.00	0.05	0.05	1 00	0.05	0.05	20.0	1.00	1 00	20.0	1 00	1 00
Lane Ulli. Factor	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.00	1.00	0.00	1.00
	1.00	0.000			1.00			1.00	0.99		0.99	
Fil Fit Droto storid	0.050	0.990		0.050				0.050	0.000		0.099	
Fit Protected	0.950	0440	0	0.950	0057	0	•	0.950	4500	0	0.988	0
Satd. Flow (prot)	1/12	3112	0	1/12	3357	0	0	1/12	1532	0	1583	0
Fit Permitted	0.162		•	0.446		•	•	0.755		•	0.942	
Satd. Flow (perm)	292	3112	0	804	3357	0	0	1357	1511	0	1509	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14							39		28	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		238.7			292.8			151.9			62.6	
Travel Time (s)		14.3			17.6			13.7			5.6	
Confl. Peds. (#/hr)	7					7	2		1	1		2
Confl. Bikes (#/hr)						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 (%)	1%	10%	10%	1%	3%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	6	513	38	12	1405	4	99	0	39	1	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	551	0	12	1409	0	0	99	39	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		5.0			5.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane		0.0			0.0			0.0			0.0	
Headway Eactor	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	1.00	1.00	24	1.00	1.00	2/	1.00	1.00	24	1.00	1.00
Number of Detectors		2	14	2 4 1	2	14	24	2	1	2 4 1	2	14
Detector Tomplate	l off	Thru		Loff	Z		Loft	Z	Dight	Loft	Thru	
Leading Detector (m)	10.6	02.0		19.6	02.0		19.6	02.0	10 6	19.6	02.0	
	10.0	93.0		10.0	93.0		10.0	93.0	10.0	10.0	93.0	
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)	18.6	5.5		18.6	5.5		18.6	5.5	18.6	18.6	5.5	
Detector 1 Type	CI+Ex	CI+Ex		CI+EX	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		8	8	8	4	4	

J.Audia, Novatech

4: 473 E of Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	87.0	87.0		87.0	87.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	72.5%	72.5%		72.5%	72.5%		27.5%	27.5%	27.5%	27.5%	27.5%	
Maximum Green (s)	80.9	80.9		80.9	80.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	1	1		7	7		1	1	1	2	2	
Act Effct Green (s)	92.0	92.0		92.0	92.0			15.6	15.6		15.6	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.13	0.13		0.13	
v/c Ratio	0.03	0.23		0.02	0.55			0.56	0.17		0.02	
Control Delay	4.3	3.6		4.9	7.4			59.7	14.0		0.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	4.3	3.6		4.9	7.4			59.7	14.0		0.2	
LOS	A	A		A	A			E	В		A	
Approach Delay		3.6			7.3			46.8			0.3	
Approach LOS		A			A			D			A	
Queue Length 50th (m)	0.2	10.7		0.5	51.0			20.8	0.0		0.0	
Queue Length 95th (m)	m1.0	15.6		2.6	98.2			33.3	8.3		0.0	
Internal Link Dist (m)	05.0	214.7		10.0	268.8			127.9			38.6	
Turn Bay Length (m)	65.0	0007		40.0	0570			004	000			
Base Capacity (vph)	223	2387		615	2572			301	366		357	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
	0.03	0.23		0.02	0.55			0.33	0.11		0.01	
	0.11											
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120				(0)								
Offset: 0 (0%), Referenced to	phase 2:EBT	L and 6:WI	BIL, Start	of Green								
Natural Cycle: 70	la a fa al											
Control Type: Actuated-Coord	inated											
Iviaximum V/C Ratio: 0.56					10000 - the - 1	00. 4						
Intersection Signal Delay: 8.9	- 64 00/			In	itersection I	LUS: A						
Intersection Capacity Utilizatio	11 04.2%			IC	U Level of	Service C						
m Volume for 95th percentile	e queue is me	etered by u	ostream s	ianal.								

Splits and Phases: 4: 473 E of Page & Innes



J.Audia, Novatech

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	88	**	1	*	**	1	5	**	1	*	**	1
Traffic Volume (vph)	125	455	24	27	1489	197	209	267	53	80	103	343
Future Volume (vph)	125	455	24	27	1489	197	209	267	53	80	103	343
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0			40.0			10.0			20.0		
Lane Litil Factor	0.0	0 95	1 00	1 00	0.95	1 00	1 00	0.95	1 00	1 00	0 95	1 00
Ped Bike Factor	1.00	0.55	0.96	0.00	0.55	0.07	0.00	0.55	0.04	0.97	0.55	0.08
Frt	1.00		0.50	0.55		0.57	0.55		0.54	0.51		0.50
Fit Protected	0.950		0.000	0.950		0.000	0.950		0.000	0.950		0.000
Satd Flow (prot)	2005	31//	1/73	1572	3357	1502	1712	3357	1502	1670	3357	1532
Elt Dormittod	2995	5144	1475	0.050	5557	1002	0.535	5557	1002	0.587	5557	1002
Setd Elow (perm)	0.900	21//	1/16	1540	2257	1/62	0.555	2257	1/10	1002	2257	1500
Bight Turn on Rod	2907	3144	1410 Voo	1049	3357	1403 Voo	900	3337	1413 Voo	1005	3357	1500 Voc
Sata Elow (PTOP)			142			142			00			100
Jalu. Flow (KTOK)		60	143		60	143		50	02		50	130
Link Speed (K/II)		00			401.4			0C 7 7 0C			201.0	
		204.5			491.4			387.7			301.9	
I ravel Time (s)	C	15.9	11	11	29.5	C	C	27.9	20	20	21.7	C
Confl. Peds. (#/nr)	0		14	14		6	6		32	32		6
Confl. Bikes (#/hr)	4.00	4.00	4.00	4.00	4.00	6	4.00	4.00	4.00	4.00	4.00	4.00
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 Venicles (%)	12%	10%	5%	10%	3%	3%	1%	3%	3%	3%	3%	1%
Adj. Flow (vph)	125	455	24	27	1489	197	209	267	53	80	103	343
Shared Lane Traffic (%)	105	455	0.4	07	4.400	107	000	0.07	-0	00	100	0.40
Lane Group Flow (vph)	125	455	24	27	1489	197	209	267	53	80	103	343
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		9.0			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
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)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	CI+Ex	CI+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	CI+Ex	Cl+Ex	CI+Ex	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

Ø6 (R)

Lane Group EBL EBT EBR WBL WBT WBL NBT NBT NBR SBL SBT SB Switch Phase Minimum Initial (s) 5.0 10.0 10.0 5.0 10.0		≯	-	\mathbf{r}	4	+	•	1	1	1	1	ţ	~
Switch Phase Dis Dis <thdis< th=""> <th< td=""><td>l ane Group</td><td>EBL</td><td>EBT</td><td>EBR</td><td>WBL</td><td>WBT</td><td>WBR</td><td>NBL</td><td>NBT</td><td>NBR</td><td>SBL</td><td>SBT</td><td>SBR</td></th<></thdis<>	l ane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum pine S0 100	Switch Phase												
Minimum Spit (s) 116 262 262 112 262 262 117 327 337 33	Minimum Initial (s)	50	10.0	10.0	5.0	10.0	10.0	50	10.0	10.0	10.0	10 0	10.0
Total Split (s) 130 72.0<	Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11 7	32.7	32.7	32.7	32.7	32.7
Total Spit (%) 10.0% 55.4% 55.4% 56.4% 9.2% 34.6% 34.6% 25.4% 25.4% Maximum Green (s) 6.4 65.8 65.8 65.8 65.8 53 33.0 30.3 30.3 30.3 30.3 30.3 30.3 30.3 30.3 30.3 30.3	Total Split (s)	13.0	72.0	72.0	13.0	72.0	72.0	12.0	45.0	45.0	33.0	33.0	33.0
Maximum Green (s) 6.4 65.8 65.8 65.8 65.8 5.3 38.3 38.3 26.3 26.3 26.3 Yellow Time (s) 3.7 3.7 3.7 3.7 3.7 3.7 3.3<	Total Split (%)	10.0%	55.4%	55.4%	10.0%	55.4%	55.4%	9.2%	34.6%	34.6%	25.4%	25.4%	25.4%
Tellow Time (a) 3.7 7.7 7.0 7.0 7.0 7.0 7.0 7.0	Maximum Green (s)	6.4	65.8	65.8	6.8	65.8	65.8	5.3	38.3	38.3	26.3	26.3	26.3
Later Time (a) 2.9 2.5 0.5 0.5	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
Lest Time Aquist (s) Lo La La <thla< th=""> La La La<td>All-Red Time (s)</td><td>29</td><td>2.5</td><td>2.5</td><td>2.5</td><td>2.5</td><td>2.5</td><td>3.4</td><td>3.4</td><td>3.4</td><td>3.4</td><td>3.4</td><td>3.4</td></thla<>	All-Red Time (s)	29	2.5	2.5	2.5	2.5	2.5	3.4	3.4	3.4	3.4	3.4	3.4
Total Lost Theor, Viscous Construction (Construction) 6.6 6.2 6.2 6.2 6.2 6.7	Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
Lead/Lag Lead Lag Lag <thlag< th=""> Lag <thlag< th=""> <thlag<< td=""><td>Total Lost Time (s)</td><td>6.6</td><td>6.2</td><td>6.0</td><td>6.2</td><td>6.2</td><td>6.2</td><td>6.7</td><td>6.7</td><td>6.7</td><td>6.7</td><td>6.7</td><td>6.7</td></thlag<<></thlag<></thlag<>	Total Lost Time (s)	6.6	6.2	6.0	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lad-Lag Optimize? Log Log <thlog< th=""> Log <thlog< th=""></thlog<></thlog<>		Lead	Lag	Lag	Lead	Lag	Lag	l ead	0.1	0.1	Lag	Lan	Lan
Lock Constraint 3.0	Lead-Lag Optimize?	Loud	Lug	Lug	Loud	Lug	Lug	Loud			Lug	Lug	Lug
Christo Letrinsoli (a) None Non	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
Note Note Onice Central Note	Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Initial (b) 10 <th10< th=""> 10 10</th10<>	Walk Time (s)	NONE	7.0	7.0	None	7 0	7.0	NULLE	7 0	7 0	7 0	7 0	7 0
Index (Value) 10.0 </td <td>Flash Dont Walk (s)</td> <td></td> <td>13.0</td> <td>13.0</td> <td></td> <td>13.0</td> <td>13.0</td> <td></td> <td>10.0</td> <td>10 0</td> <td>10.0</td> <td>10 0</td> <td>19.0</td>	Flash Dont Walk (s)		13.0	13.0		13.0	13.0		10.0	10 0	10.0	10 0	19.0
Closs of the form of th	Pedestrian Calls (#/br)		1/	1/		6	6		32	32	6	6	6
Actuated g(2) 1.3 1.3 1.3 1.3 0.3 0.10 0.30 0.30 0.30 0.30 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 70.0 0.00 0.0 <td>Act Effet Green (s)</td> <td>73</td> <td>73.7</td> <td>73.7</td> <td>65</td> <td>67.6</td> <td>67.6</td> <td>35.6</td> <td>35.6</td> <td>35.6</td> <td>23.6</td> <td>23.6</td> <td>23.6</td>	Act Effet Green (s)	73	73.7	73.7	65	67.6	67.6	35.6	35.6	35.6	23.6	23.6	23.6
Actuatory of Netico 0.00 0.01	Actuated a/C Patio	0.06	0.57	0.57	0.5	07.0	07.0	0.27	0.27	0.27	0.18	0.18	20.0
Driveduct 0.14 0.12 0.03 0.03 0.03 0.04 0.01	v/c Ratio	0.00	0.37	0.07	0.05	0.52	0.52	0.27	0.27	0.27	0.10	0.10	0.10
Ochrikobelay 0.0.0 0.0.2 0.0.0 1.1.3 3.0.3 0.1.7.3 3.0.3 3.0.4 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 3.0.3 5.0.3	Control Delay	86.0	16.20	0.05	71.0	33.5	6.1	55.0	37.5	3.0	5/ 5	44.5	55.0
Concernment Disc DisDiscDisc <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.1</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>44.5</td> <td>0.0</td>		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	44.5	0.0
Total Delay Dots Total Sols Sols <td></td> <td>0.0 86.0</td> <td>16.2</td> <td>0.0</td> <td>71.0</td> <td>33.5</td> <td>6.1</td> <td>55.0</td> <td>37.5</td> <td>3.0</td> <td>54.5</td> <td>44.5</td> <td>55.0</td>		0.0 86.0	16.2	0.0	71.0	33.5	6.1	55.0	37.5	3.0	54.5	44.5	55.0
Loss 1 D A L D A D D D Approach LOS C C D D D Queue Length 50th (m) 15.3 31.6 0.0 6.3 159.3 6.4 39.7 25.4 0.0 16.5 10.6 48 Queue Length 95th (m) #31.9 42.0 0.0 15.5 191.2 18.2 60.8 36.1 3.7 31.2 18.1 #93 Internal Link Dist (m) 240.5 467.4 363.7 277.9 Turn Bay Length (m) 140.0 80.0 105.0 60.0 50.0 55.0 60 Base Capacity (vph) 168 1783 865 82 1745 829 292 989 474 202 679 41 Starvation Cap Reductn 0		00.0 E	10.2 R	٥.0	71.5 E	55.5	0.1	55.0 E	J7.J	5.0	J4.J	44.J	55.5 E
Instruction 30.3 30.3 41.0 30.3 Approach LOS C D D Queue Length 50th (m) 15.3 31.6 0.0 6.3 159.3 6.4 39.7 25.4 0.0 16.5 10.6 48.8 Queue Length 95th (m) #31.9 42.0 0.0 15.5 191.2 18.2 60.8 36.1 3.7 31.2 18.1 #93 Internal Link Dist (m) 240.5 467.4 363.7 277.9 7 7 Turn Bay Length (m) 140.0 80.0 105.0 60.0 50.0 55.0 60 Base Capacity (vph) 168 1783 865 82 1745 829 292 989 474 202 679 41 Starvation Cap Reductn 0 <td>Approach Delay</td> <td>1</td> <td>30.0</td> <td>~</td> <td>L</td> <td>30.0</td> <td>~</td> <td>L</td> <td>/1 O</td> <td>~</td> <td>U</td> <td>53.5</td> <td>L</td>	Approach Delay	1	30.0	~	L	30.0	~	L	/1 O	~	U	53.5	L
Inprivative Log 0 0 0 0 0 0 0 16.5 10.6 48 Queue Length 50th (m) #31.9 42.0 0.0 15.5 191.2 18.2 60.8 36.1 3.7 31.2 18.1 #93 Internal Link Dist (m) 240.5 467.4 363.7 277.9 77.9 77.9 Turn Bay Length (m) 140.0 80.0 105.0 60.0 50.0 55.0 60 Base Capacity (vph) 168 1783 865 82 1745 829 292 989 474 202 679 41 Starvation Cap Reductn 0 10 0 <t< td=""><td>Approach LOS</td><td></td><td>0.00</td><td></td><td></td><td>00.0 C</td><td></td><td></td><td>יי<u>י</u> ח</td><td></td><td></td><td>00.0 D</td><td></td></t<>	Approach LOS		0.00			00.0 C			יי <u>י</u> ח			00.0 D	
Construction (init) 113.5 01.0 01.0 10.3 10.0 10.3 10.0 <td< td=""><td>Oueue Length 50th (m)</td><td>15 3</td><td>31.6</td><td>0.0</td><td>63</td><td>150 3</td><td>64</td><td>30.7</td><td>25 /</td><td>0.0</td><td>16.5</td><td>10.6</td><td>18.4</td></td<>	Oueue Length 50th (m)	15 3	31.6	0.0	63	150 3	64	30.7	25 /	0.0	16.5	10.6	18.4
Construction 19.1 <td>Queue Length 95th (m)</td> <td>#31.0</td> <td>/2 0</td> <td>0.0</td> <td>15.5</td> <td>103.5</td> <td>18.2</td> <td>60.8</td> <td>20.4</td> <td>3.7</td> <td>31.2</td> <td>18.1</td> <td>#03.9</td>	Queue Length 95th (m)	#31.0	/2 0	0.0	15.5	103.5	18.2	60.8	20.4	3.7	31.2	18.1	#03.9
International Difference 240.3 0.47.4 303.7 0.27.3 0.07.4 <	Internal Link Dist (m)	#31.3	2/0 5	0.0	10.0	191.2	10.2	00.0	363.7	5.7	J1.Z	277.0	#33.2
Hain Bay Lengin (iii) 140.5 50.5 100.5 100.5 50.5	Turn Bay Length (m)	1/0 0	240.5	80.0	105.0	407.4	60.0	50.0	505.7	50.0	55.0	211.5	60.0
Date Capacity (v)n/ 100 1103 003 02 1143 023 232 303 414 202 013 41 Starvation Cap Reductn 0	Base Capacity (yph)	168	1783	865	82	17/5	820	202	080	17/	202	670	/13
Statution Cap Reductin 0	Stanuation Can Reducto	100	1703	000	02	0	023	252	303 0	4/4	202	079	413
Spinaack Cap Reductin 0	Spillback Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio 0.74 0.26 0.03 0.33 0.85 0.24 0.72 0.27 0.11 0.40 0.15 0.8 Intersection Summary Area Type: Other Oth	Storage Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Summary Area Type: Other Cycle Length: 130 Actuated Cycle Length: 130 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: 0.89 Intersection LOS: D Intersection Capacity Utilization 95.1% Intersection LOS: D Intersection (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Reduced v/c Ratio	0 7/	0.26	0.03	0 33	0.85	0 2/	0 72	0.27	0 11	0.40	0 15	0.83
Intersection Summary Area Type: Other Cycle Length: 130 Actuated Cycle Length: 130 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: 0.89 Intersection Signal Delay: 35.9 Intersection Capacity Utilization 95.1% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.		0.74	0.20	0.05	0.55	0.00	0.24	0.72	0.21	0.11	0.40	0.15	0.00
Cycle Length: 130 Actuated Cycle Length: 130 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: 0.89 Intersection Signal Delay: 35.9 Intersection LOS: D Intersection Capacity Utilization 95.1% Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Intersection Summary	Other											
Actuated Cycle Length: 130 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: 0.89 Intersection Signal Delay: 35.9 Intersection Capacity Utilization 95.1% Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Cycle Length: 130	Ourier											
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: 0.89 Intersection Signal Delay: 35.9 Intersection Capacity Utilization 95.1% Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Actuated Cycle Length: 130												
Natural Cycle: 105 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.89 Intersection Signal Delay: 35.9 Intersection LOS: D Intersection Capacity Utilization 95.1% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Offset: 0 (0%), Referenced to	phase 2:EBT	and 6:WE	BT, Start of	Green								
Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.89 Intersection Signal Delay: 35.9 Intersection LOS: D Intersection Capacity Utilization 95.1% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Use of the section content of th	Natural Cycle: 105												
Maximum v/c Ratio: 0.89 Intersection LOS: D Intersection Capacity Utilization 95.1% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Vertice F	Control Type: Actuated-Coord	inated											
Intersection Signal Delay: 35.9 Intersection LOS: D Intersection Capacity Utilization 95.1% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Vertice F	Maximum v/c Ratio: 0.89												
Intersection Capacity Utilization 95.1% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Intersection Signal Delay: 35.9	9			In	ntersection	LOS: D						
Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Intersection Capacity Utilizatio	on 95.1%			IC	CU Level o	f Service F						
 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. 	Analysis Period (min) 15												
Queue shown is maximum after two cycles.	# 95th percentile volume exc	ceeds capaci	ty, queue r	may be lon	ger.								
	Queue shown is maximum	after two cyc	les.										
Splits and Phases: 1: Orleans & Innes	Splits and Phases: 1: Orlea	ns & Innes											
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	88	**	1	×	**	1	8	**	1		**	1
Traffic Volume (vph)	596	1737	163	63	756	151	66	232	105	198	248	209
Future Volume (vph)	596	1737	163	63	756	151	66	232	105	198	248	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0			40.0			10.0			20.0		
Lane Litil Factor	0.97	0.95	1 00	1 00	0 95	1 00	1 00	0.95	1 00	1 00	0.95	1 00
Ped Bike Factor	0.07	0.00	0.95	1.00	0.00	0.97	0.99	0.00	0.97	0.98	0.00	0.97
Frt	0.00		0.50	1.00		0.850	0.00		0.850	0.00		0.57
Fit Protected	0.950		0.000	0 950		0.000	0.950		0.000	0.950		0.000
Satd Flow (prot)	3288	3357	1532	1712	3203	1517	1712	3300	1532	1712	3300	1532
Elt Permitted	0.950	0001	1002	0.050	0200	1017	0.460	0000	1002	0.607	0000	1002
Satd Flow (perm)	3266	3357	1/56	1706	3203	1/77	835	3300	1/170	1076	3300	1/85
Pight Turn on Ped	5200	5551	1400 Voc	1700	5255	Voc	000	0000	1473 Voc	1070	0000	Voc
Satd Flow (PTOP)			165			230			150			225
Link Spood (k/b)		60	105		60	200		50	100		50	225
Link Distance (m)		264.5			401.4			2077			201.0	
		204.0			491.4			27.0			01.9 01.7	
Confl Doda (#/br)	7	15.9	າາ	22	29.0	7	15	21.9	10	10	21.7	15
Confl. Peus. (#/III)	1		22	22		1	10		10	10		15
Coniii. Bikes (#/III)	1.00	1 00	4	1 00	1 00	1 00	1 00	1.00	1 00	1 00	1 00	1.00
	1.00	1.00	1.00	1.00	1.00 E0/	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adi, Flow (upb)	Z%	3% 1727	162	62	3% 756	Z70	170	2%	105	100	2%	1%
Adj. Flow (vpn)	590	1/3/	103	03	100	101	00	232	105	198	248	209
Shared Lane Traffic (%)	500	1707	100	60	750	151	00	000	105	100	040	200
Lane Group Flow (vpn)	590 No	1/3/	103	03	/ 00	ICI No	00	23Z	105	198	248	209
Enter Blocked Intersection	INO	INO	INO	INO	INO	INO	INO	INO	INO D NIA	INO	INO	INO D NIA
Lane Alignment	LNA	Lett	R NA	L NA	Lett	R NA	L NA	Len	R NA	L NA	Lett	RNA
Viedian VVidtn(m)		9.0			7.4			6.0			6.0	
		0.0			0.0			0.0			0.0	
		5.0			5.0			5.0			5.0	
	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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/n)	24	0	14	24	0	14	24	0	14	24	0	14
Number of Detectors	1-4	Z		1-4	Z		1	Z		1.4	Z	
Detector Template	Len	Inru	Right	Len	Inru	Right	Lett	Inru	Right	Lett	Inru	Right
Leading Detector (m)	18.6	93.0	18.0	18.6	93.0	18.0	18.0	93.0	18.6	18.0	93.0	18.6
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)		5.5	18.6		5.5			5.5		18.0	5.5	18.6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	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 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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel		~ ~			~ ~ ~			~ ~			~ ~	
Detector 2 Extend (s)		0.0	-	_	0.0	-		0.0	_	_	0.0	_
Iurn Iype	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	31.0	49.0	49.0	16.0	34.0	34.0	12.0	45.0	45.0	33.0	33.0	33.0
Total Split (%)	28.2%	44.5%	44.5%	14.5%	30.9%	30.9%	10.9%	40.9%	40.9%	30.0%	30.0%	30.0%
Maximum Green (s)	24.4	42.8	42.8	9.8	27.8	27.8	5.3	38.3	38.3	26.3	26.3	26.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?		- 0	- 0		- 0	- 0				- 0	- 0	- 5
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		22	22		7	7		32	32	15	15	15
Act Effct Green (s)	23.1	50.9	50.9	8.5	33.5	33.5	33.9	33.9	33.9	24.3	24.3	24.3
Actuated g/C Ratio	0.21	0.46	0.46	0.08	0.30	0.30	0.31	0.31	0.31	0.22	0.22	0.22
v/c Ratio	0.86	1.12	0.21	0.48	0.75	0.25	0.22	0.22	0.19	0.84	0.33	0.42
Control Delay	55.5	94.0	4.1	51.6	49.6	11.2	26.7	27.6	1.7	69.2	36.8	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	94.0	4.1	51.6	49.6	11.2	26.7	27.6	1.7	69.2	36.8	6.3
LOS	E	F	А	D	D	В	С	C	А	E	D	A
Approach Delay		78.9			43.7			20.7			36.9	
Approach LOS		Е			D			С			D	
Queue Length 50th (m)	58.0	~233.9	0.0	10.8	63.5	1.6	8.8	16.7	0.0	36.7	21.3	0.0
Queue Length 95th (m)	#80.4	#274.1	11.4	26.5	#111.7	20.5	17.7	25.2	2.9	#69.4	31.6	13.8
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	729	1552	762	152	1003	610	299	1180	618	257	810	526
Starvation Cap Reductr	n 0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	1.12	0.21	0.41	0.75	0.25	0.22	0.20	0.17	0.77	0.31	0.40
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length:	110											
Offset: 0 (0%), Reference	ced to phase 2:EB	F and 6:WE	3T, Start of	Green								
Natural Cycle: 125	0											
Control Type: Actuated-	Coordinated											
Maximum V/c Ratio: 1.1	2											
Intersection Signal Dela	IY: 60.1			Ir	itersection	LUS: E	`					
Intersection Capacity U	tilization 102.3%			IC	U Level o	f Service (j					
Analysis Period (min) 1			afinite.									
 volume exceeds ca Queue chaure interviewe 	pacity, queue is the	eoretically I	minite.									
Queue snown is max	kimum atter two cy	cies.	a a c k a l									
# 95th percentile volu	me exceeds capac	ity, queue	may be lor	iger.								
Splits and Phases: 1:	Orleans & Innes					9						8
		_				5.5		7 10-				

1 Ø1	₩Ø2 (R)	10-2	103	₽ Ø4	
16 s	49.s		12 s	33 s	
▶ ø 5		Ø6 (R)	Ø8		
31 s		34 s	45 s		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	≜1 6		1	≜ 16			4			4	
Traffic Volume (vph)	63	1768	30	93	849	64	23	7	77	54	18	36
Future Volume (vph)	63	1768	30	93	849	64	23	7	77	54	18	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	35.0			25.0			2.5			2.5		
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			1.00			0.98			0.99	
Frt		0.997			0.989			0.903			0.955	
Flt Protected	0.950			0.950				0.989			0.976	
Satd. Flow (prot)	1695	3376	0	1695	3256	0	0	1544	0	0	1579	0
Flt Permitted	0.291			0.080				0.918			0.790	
Satd. Flow (perm)	517	3376	0	143	3256	0	0	1431	0	0	1270	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			13			19			23	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		491.4			236.7			212.5			273.4	
Travel Time (s)		29.5			14.2			19.1			24.6	
Confl. Peds. (#/hr)	9		5	5		9	5		13	13		5
Confl. Bikes (#/hr)			1						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%	6%	2%	5%	2%	5%	1%	3%	6%	1%	11%
Adi, Flow (vph)	63	1768	30	93	849	64	23	7	77	54	18	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	1798	0	93	913	0	0	107	0	0	108	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	L NA	Left	R NA	LNA	Left	R NA
Median Width(m)		5.0	0		5.0	Ū		0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		10.0			10.0			5.0			5.0	
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	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	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	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		CI+Ex	CI+Ex		CI+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	
Detector 1 Queue (s)	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	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

2: Page & Innes PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	39.2	39.2		39.2	39.2		37.8	37.8		37.8	37.8	
Total Split (s)	72.0	72.0		72.0	72.0		38.0	38.0		38.0	38.0	
Total Split (%)	65.5%	65.5%		65.5%	65.5%		34.5%	34.5%		34.5%	34.5%	
Maximum Green (s)	65.8	65.8		65.8	65.8		31.2	31.2		31.2	31.2	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2			6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	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		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	5	5		9	9		13	13		5	5	
Act Effct Green (s)	78.1	78.1		78.1	78.1			18.9			18.9	
Actuated g/C Ratio	0.71	0.71		0.71	0.71			0.17			0.17	
v/c Ratio	0.17	0.75		0.92	0.39			0.41			0.46	
Control Delay	2.3	7.8		93.5	8.2			35.0			35.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	2.3	7.8		93.5	8.2			35.0			35.4	
LOS	A	A		F	A			D			D	
Approach Delay		7.6			16.1			35.0			35.4	
Approach LOS		А			В			D			D	
Queue Length 50th (m)	1.0	27.7		7.9	18.8			16.7			16.2	
Queue Length 95th (m)	m1.5	m21.8		#49.8	53.8			26.6			26.6	
Internal Link Dist (m)		467.4			212.7			188.5			249.4	
Turn Bay Length (m)	100.0			100.0								
Base Capacity (vph)	366	2396		101	2314			419			376	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.17	0.75		0.92	0.39			0.26			0.29	
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 2 (2%), Referenced to	phase 2:EBT	L and 6:W	BTL, Start	of Green								
Natural Cycle: 140												
Control Type: Actuated-Coord	linated											
Maximum v/c Ratio: 0.92	_											
Intersection Signal Delay: 12.3	3			In	tersection	LOS: B						
Intersection Capacity Utilization	on 92.2%			IC	CU Level of	Service F						
Analysis Period (min) 15 # 95th percentile volume exe	ceeds capaci	ty, queue n	nay be lon	ger.								
			,	~								

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Page & Innes

, ♣ø2 (R)	↓ Ø4	
72 s	38 s	
₩ Ø6 (R)	<\$ [↑] ø8	
72 s	38 s	

	-	\rightarrow	-	-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Lane Configurations	**	1	N	**	N	1	
Traffic Volume (vph)	1600	169	76	929	126	60	
Future Volume (vph)	1600	169	76	929	126	60	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		50.0	65.0		70.0	70.0	
Storage Lanes		1	1		1	0	
Taper Length (m)		-	80.0		20.0	-	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Ped Bike Factor	0.00	0.97		0.00			
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd Flow (prot)	3357	1502	1679	3357	1679	1502	
Elt Permitted	0001	1002	0 101	0001	0.950	1002	
Satd Flow (perm)	3357	1452	178	3357	1679	1502	
Right Turn on Red	0001	Yes	110	0001	1015	Yes	
Satd Flow (RTOR)		122				22	
Link Speed (k/h)	60	122		60	50		
Link Distance (m)	226.7			238.7	204.5		
Travel Time (s)	1/ 2			1/1 3	1/ 7		
Confl Peds (#/br)	14.2	6	6	14.3	14.7		
Dook Hour Footor	1.00	1 00	1.00	1 00	1.00	1.00	
	1.00	1.00	1.00	0.00	1.00	1.00	
Auj. Flow (vpl) Sharad Lana Traffia (%)	1000	109	70	929	120	00	
Shared Lane Trainc (%)	1600	160	76	000	106	60	
Enter Blocked Interpetion	1000	No	/0 No	929 No	120 No	00 No	
	INU Loft	Diaht	INU Loft	INU Loff			
Lane Alignment	Leit	Right	Leit	Leit	2 T	K NA	
	5.0			5.0	3.7		
	0.0			0.0	0.0		
	9.0			9.0	9.0		
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	
Turning Speed (k/n)	0	14	24	0	24	14	
Number of Detectors	Z		1	Z	1		
Detector Template	Inru	Right	Left	Inru	Left	Right	
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6	
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)	5.5	18.6	18.6	5.5	18.6	18.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	
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)	87.5			87.5			
Detector 2 Size(m)	5.5			5.5			
Detector 2 Type	CI+Ex			CI+Ex			
Detector 2 Channel				• •			
Detector 2 Extend (s)	0.0	_	_	0.0		_	
Iurn Type	NA	Perm	Perm	NA	Prot	Perm	•
Protected Phases	2			6	4	_	3
Permitted Phases		2	6	_		8	
Detector Phase	2	2	6	6	4	8	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	3.0

	-	\rightarrow	-	-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Minimum Split (s)	31.2	31.2	31.2	31.2	11.3	37.3	30.0
Total Split (s)	68.0	68.0	68.0	68.0	12.0	42.0	30.0
Total Split (%)	61.8%	61.8%	61.8%	61.8%	10.9%	38.2%	27%
Maximum Green (s)	61.8	61.8	61.8	61.8	5.7	35.7	28.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	2.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.0	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.3	6.3	
Lead/Lag					Laq		Lead
Lead-Lag Optimize?					Ŭ		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0			21.0
Pedestrian Calls (#/hr)	10	10	10	10			10
Act Effct Green (s)	74.8	74.8	74.8	74.8	16.7	22.7	
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.15	0.21	
v/c Ratio	0.70	0.16	0.63	0.41	0.49	0.18	
Control Delay	5.9	0.5	37.6	7.6	53.0	24.9	
Queue Delay	0.1	0.0	0.0	0.0	0.0	0.0	
Total Delay	6.0	0.5	37.6	7.6	53.0	24.9	
LOS	А	А	D	А	D	С	
Approach Delay	5.5			9.9	43.9		
Approach LOS	А			А	D		
Queue Length 50th (m)	29.6	0.1	5.1	28.1	22.9	6.6	
Queue Length 95th (m)	74.1	m0.0	#38.2	47.8	#68.3	13.9	
Internal Link Dist (m)	212.7			214.7	180.5		
Turn Bay Length (m)		50.0	65.0		70.0	70.0	
Base Capacity (vph)	2282	1026	121	2282	255	502	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	50	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.72	0.16	0.63	0.41	0.49	0.12	
Intersection Summary							
Area Type:	Other						
Cycle Length: 110							
Actuated Cycle Length: 110							
Offset: 22 (20%), Referenced t	o phase 2:E	BT and 6:V	VBTL, Sta	rt of Green	l i		
Natural Cycle: 120							
Control Type: Actuated-Coordi	nated						
Maximum v/c Ratio: 0.70							
Intersection Signal Delay: 9.4				In	tersection	LOS: A	
Intersection Capacity Utilization	n 78.0%			IC	U Level o	f Service D	
Analysis Period (min) 15							
# 95th percentile volume exc	eeds capaci	ty, queue r	nay be lon	ger.			
Queue shown is maximum a	after two cyc	les.					
m Volume for 95th percentile	queue is me	etered by u	ipstream s	ignal.			

Splits and Phases: 3: Lamarche & Innes

→ø2 (R)	#\$ Ø3	104
68 s	30 s	12 s
🗸 🗸 🖉	108	
68 s	42.s	

4: 473 E of Page & Innes PM Peak Hour

Lane Confurme (oph) EBI EBIT EBR WEL WEL WER NBIT NBIT NBIT NBIT SEL SEIT SEBIT SEIT		٦	-	\mathbf{r}	4	+	•	•	1	1	1	Ļ	~
Lane Configurations Y Ab Y Ab< Y Ab<	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Outlone (ph) 8 1723 131 67 944 8 88 0 56 4 0 10 load Elow (php) 1800	Lane Configurations	1	A 12		7	≜1 5			<u>ل</u> اً	1		4	
Flute Volume (vph) 80 131 67 944 8 88 0 56 4 0 100 Storage Langth (m) 650 0.0 40.0 1800 <td< td=""><td>Traffic Volume (vph)</td><td>8</td><td>1723</td><td>131</td><td>67</td><td>944</td><td>8</td><td>88</td><td>0</td><td>56</td><td>4</td><td>0</td><td>10</td></td<>	Traffic Volume (vph)	8	1723	131	67	944	8	88	0	56	4	0	10
Ideal Flow (vphp) 1800 180 1800 1800	Future Volume (vph)	8	1723	131	67	944	8	88	0	56	4	0	10
Storage Length (m) 65.0 0.0 40.0 0.0 0.0 0.0 0.0 0.0 Taper Length (m) 80.0 30.0 20.0 20.0 20.0 0.0	Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Lange 1 0 1 0 0 1 0 0 Taper Length (m) 80.0 30.0 20.0<	Storage Length (m)	65.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Tape Length (m) 80.0 30.0 20.0 20.0 Lane UHI, Factor 1.00 0.95 0.95 1.00 0.95 0.95 0.00 1.00 1.00 1.00 1.00 0.99 Per Divected 0.999 0.999 0.950 0.950 0.950 0.950 0.950 0.950 0.980 0.994 1712 331 0 1.588 0.057 0.748 0.911 1.588 0.911 1.588 0.911 1.588 0.911 1.581 3.31 0 1.57 3.322 0 0 1.343 1.6 1.407 0 1.57 3.22 0 0 1.343 1.6 0.956 1.57 3.22 0 0 1.343 1.6 0.956 1.57 3.22 0 0 1.343 3.1 1.6 1.6 1.56 Conf. Pects, (Phr) 2.2 3 .56 Conf. Pects, (Phr) 1.76 1.3.7 5.56 Conf. Pects, (Phr) 1.6 1.6 1.6	Storage Lanes	1		0	1		0	0		1	0		0
Line ULF actor 1.00 0.95 0.95 1.00 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01	Taper Length (m)	80.0			30.0			20.0			20.0		
Ped Bike Factor 1.00	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
Pri 0.989 0.999 0.850 0.904 FIN rotected 0.950 0.950 0.950 0.966 FIN rotected 0.280 0.0712 3322 0 0.1712 1381 0 1658 0 FIN Permitted 0.288 0.067 0.748 0.911 0 1677 0.748 0.911 Stat Flow (prot) 11712 3349 0 157 3322 0 0.1343 1381 0 1467 0 0 Ryht Turn on Red Yes	Ped Bike Factor		1.00						1.00			0.99	
Fit Protected 0.950 0.050 0.950 0.070 0.986 0.986 Satd. Flow (prot) 1712 3349 0 1712 3322 0 0 1712 181 0 1568 0.986 Satd. Flow (perm) 519 3349 0 157 3322 0 0 1341 0 1467 0 Satd. Flow (perm) 519 3349 0 157 3322 0 0 1343 131 31 Satd. Flow (RTOR) 14 1 1 31 31 31 Link Speed (kh) 60 60 40 40 40 40 Link Speed (kh) 100<	Frt		0.989			0.999				0.850		0.904	
Said Flow (pon) 1712 3349 0 1712 3322 0 0 1712 1381 0 1588 0 FI Permited 0.288 0.087 0.748 0.0144 0 0.747 0.748 0.011 Righ Turn on Red Yes	Elt Protected	0.950			0.950	0.000			0.950			0.986	
Pit Permitted 0.28 0.08 0.087 0.087 0.748 0.0911 0 Satd. Flow (perm) 519 3349 0 157 3322 0 0 1331 131 0 1467 0 Satd. Flow (PtOR) 14 1 1 31 31 31 1 1 Link Speed (Vh/h) 60 60 40 40 40 1 1 31 31 31 31 31 1 1 1 56 Conf. Pets; (#hr/h) 2 2 3 33 1	Satd Flow (prot)	1712	3349	0	1712	3322	0	0	1712	1381	0	1588	0
Satz Flow (perm) 519 3349 0 157 3322 0 0 1343 1381 0 1447 0 Right Turn on Red Yes	Elt Permitted	0.288	0010	U	0.087	UULL	Ū	Ū	0 748	1001	U	0.911	Ū
Construction Construction<	Satd Flow (perm)	519	3349	0	157	3322	0	0	1343	1381	0	1467	0
Total Flow (RTOR) 14 1 31 31 31 Link Speed (kh) 60 60 40 40 Link Distance (m) 28.7 292.8 151.9 62.6 Travel Time (s) 14.3 17.6 13.7 5.6 Confl. Peds (#hr) 2 2 3 3 Confl. Sites (#hr) 1 0 1.00 <	Right Turn on Red	010	00-0	Yes	107	0022	Yes	0	10-10	Yes	U	101	Yes
Data: Speed (kh) Fit	Satd Flow (RTOR)		14	100		1	100			31		31	100
Link Distance (m) 20 40 40 Link Distance (m) 238.7 292.8 151.9 62.6 Travel Time (s) 14.3 17.6 13.7 5.6 Confl. Biks (#hr) 1	Link Speed (k/b)		60			60			40	51		40	
Link Diskinde (III) 230.1 232.0 13.3 01.3 02.0 Travel Time (S) 14.3 17.6 13.7 5.6 Confl. Bites (Khr) 2 2 3 3 Confl. Bites (Khr) 1	Link Distance (m)		228.7			202.8			151.0			62.6	
Invest Inv Inv<			230.7			292.0			101.9			02.0	
Collin. Freds. (#ht) 2 2 3 3 3 Peak Hour Factor 1.00	Confl Dodo (#/br)		14.3	0	0	17.0		2	13.7			0.C	2
Contr. bites (inff) 1	Confil. Peas. (#/hit)			Z	2			ა					ა
Peak Hold Factor 1.00	Confil. Bikes (#/nr)	4.00	1.00	1 00	1 00	4 00	1 00	4 00	1 00	4 00	4 00	1.00	4 00
Heavy Venicles (%) 1% 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
Adj. How (vph) 8 1/23 131 6/ 944 8 88 0 56 4 0 10 Lane Group Flow (vph) 8 1854 0 67 952 0 0 88 56 0 14 0 Enter Blocked Intersection No	Heavy Venicles (%)	1%	2%	1%	1%	4%	1%	1%	1%	12%	1%	1%	1%
Shared Lane Group Flow (vph) 8 1854 0 67 952 0 0 88 56 0 14 0 Lane Group Flow (vph) 8 1854 0 67 952 0 0 88 56 0 14 0 Lane Group Flow (vph) 8 1854 0 67 952 0 0 No	Adj. Flow (vph)	8	1/23	131	67	944	8	88	0	56	4	0	10
Lane Group How (opt) 8 1854 0 67 952 0 0 88 56 0 14 0 Enter Blocked Intersection No No <td>Shared Lane Traffic (%)</td> <td>•</td> <td>1051</td> <td>•</td> <td>07</td> <td>050</td> <td>•</td> <td>•</td> <td>00</td> <td>-0</td> <td>•</td> <td></td> <td>•</td>	Shared Lane Traffic (%)	•	1051	•	07	050	•	•	00	-0	•		•
Enter Blocked Intersection No No <th< td=""><td>Lane Group Flow (vph)</td><td>8</td><td>1854</td><td>0</td><td>67</td><td>952</td><td>0</td><td>0</td><td>88</td><td>56</td><td>0</td><td>14</td><td>0</td></th<>	Lane Group Flow (vph)	8	1854	0	67	952	0	0	88	56	0	14	0
Lane Alignment LNA Left RNA LA Left RNA Left	Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Median Width(m) 5.0 5.0 0.0 0.0 Link Offset(m) 0.0 0.0 0.0 0.0 0.0 Crosswalk Width(m) 9.0 9.0 9.0 9.0 9.0 Two way Left Turn Lane	Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Link Offset(m) 0.0 0.0 0.0 0.0 0.0 Crosswalk Width(m) 9.0 9.0 9.0 9.0 9.0 Two way Left Turn Lane	Median Width(m)		5.0			5.0			0.0			0.0	
Crosswalk Width(m) 9.0 9.0 9.0 9.0 9.0 Two way Left Tum Lane 1.06 1.00 <t< td=""><td>Link Offset(m)</td><td></td><td>0.0</td><td></td><td></td><td>0.0</td><td></td><td></td><td>0.0</td><td></td><td></td><td>0.0</td><td></td></t<>	Link Offset(m)		0.0			0.0			0.0			0.0	
Two way Left Turn Lane Headway Factor 1.06	Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Headway Factor 1.06<	Two way Left Turn Lane												
Turning Speed (k/h) 24 14 <td>Headway Factor</td> <td>1.06</td>	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
Number of Detectors 1 2 1 2 1 2 1 1 2 Detector Template Left Thru Left Thru Right Left Thru Leading Detector (m) 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 Trailing Detector (m) 0.0	Turning Speed (k/h)	24		14	24		14	24		14	24		14
Detector Template Left Thru Left Thru Left Thru Right Left Thru Leading Detector (m) 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 0.0	Number of Detectors	1	2		1	2		1	2	1	1	2	
Leading Detector (m) 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 Trailing Detector (m) 0.0 <td>Detector Template</td> <td>Left</td> <td>Thru</td> <td></td> <td>Left</td> <td>Thru</td> <td></td> <td>Left</td> <td>Thru</td> <td>Right</td> <td>Left</td> <td>Thru</td> <td></td>	Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Trailing Detector (m) 0.0	Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0	18.6	18.6	93.0	
Detector 1 Position(m) 0.0	Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m) 18.6 5.5 18.6 5.5 18.6 5.5 18.6 18.6 5.5 Detector 1 Type CI+Ex CI CI <t< td=""><td>Detector 1 Position(m)</td><td>0.0</td><td>0.0</td><td></td><td>0.0</td><td>0.0</td><td></td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td></td></t<>	Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Type CI+Ex Out 0.0	Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5	18.6	18.6	5.5	
Detector 1 Channel Detector 1 Extend (s) 0.0 1 + Ex Cl+Ex Cl+Ex <t< td=""><td>Detector 1 Type</td><td>CI+Ex</td><td>CI+Ex</td><td></td><td>Cl+Ex</td><td>CI+Ex</td><td></td><td>CI+Ex</td><td>CI+Ex</td><td>CI+Ex</td><td>CI+Ex</td><td>Cl+Ex</td><td></td></t<>	Detector 1 Type	CI+Ex	CI+Ex		Cl+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	Cl+Ex	
Detector 1 Extend (s) 0.0	Detector 1 Channel												
Detector 1 Queue (s) 0.0	Detector 1 Extend (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	Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m) 87.5 87.5 87.5 87.5 Detector 2 Size(m) 5.5 5.5 5.5 5.5 Detector 2 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 2 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 2 Channel 0.0 0.0 0.0 0.0 Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Turn Type Perm NA Perm NA Perm NA Protected Phases 2 6 8 8 4 Detector Phase 2 2 6 8 8 4	Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Size(m) 5.5 5.5 5.5 Detector 2 Type CI+Ex CI+Ex CI+Ex Detector 2 Channel 0.0 0.0 0.0 0.0 Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Turn Type Perm NA Perm NA Perm NA Protected Phases 2 6 8 8 4 Permitted Phases 2 2 6 8 8 4	Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 2 Channel 0.0 0.0 0.0 0.0 0.0 Turn Type Perm NA Perm NA Perm NA Protected Phases 2 6 8 4 Permitted Phases 2 6 8 8 4	Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Channel 0.0 0.0 0.0 0.0 Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Turn Type Perm NA Perm NA Perm NA Protected Phases 2 6 8 4 Permitted Phases 2 6 6 8 4 Detector Phase 2 2 6 8 8 4 4	Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Turn Type Perm NA Perm	Detector 2 Channel												
Turn TypePermNAPermNAPermPermNAProtected Phases2684Permitted Phases26884Detector Phase2266884	Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Protected Phases2684Permitted Phases26884Detector Phase2266884	Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Permitted Phases 2 6 8 8 4 Detector Phase 2 2 6 6 8 8 4	Protected Phases		2			6			8			4	
Detector Phase 2 2 6 6 8 8 4 4	Permitted Phases	2			6			8	•	8	4		
	Detector Phase	2	2		6	6		8	8	8	4	4	

J.Audia, Novatech

4: 473 E of Page & Innes PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	77.0	77.0		77.0	77.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	70.0%	70.0%		70.0%	70.0%		30.0%	30.0%	30.0%	30.0%	30.0%	
Maximum Green (s)	70.9	70.9		70.9	70.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	2	2		1	1		1	1	1	3	3	
Act Effct Green (s)	87.4	87.4		87.4	87.4			14.7	14.7		14.7	
Actuated g/C Ratio	0.79	0.79		0.79	0.79			0.13	0.13		0.13	
v/c Ratio	0.02	0.70		0.54	0.36			0.49	0.27		0.06	
Control Delay	1.1	3.3		29.6	5.4			51.9	24.4		4.4	
Queue Delay	0.0	0.2		0.0	0.0			0.0	0.0		0.0	
Total Delay	1.1	3.6		29.6	5.4			51.9	24.4		4.4	
LOS	А	А		С	А			D	С		А	
Approach Delay		3.6			7.0			41.2			4.4	
Approach LOS		А			А			D			А	
Queue Length 50th (m)	0.1	4.9		4.3	25.7			16.8	4.5		0.0	
Queue Length 95th (m)	m0.2	11.8		#32.5	55.8			27.2	13.2		2.0	
Internal Link Dist (m)		214.7			268.8			127.9			38.6	
Turn Bay Length (m)	65.0			40.0								
Base Capacity (vph)	412	2663		124	2639			325	358		379	
Starvation Cap Reductn	0	222		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.02	0.76		0.54	0.36			0.27	0.16		0.04	
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 36 (33%), Referenced to	o phase 2:E	BTL and 6:	WBTL, Sta	art of Gree	en							
Natural Cycle: 90												
Control Type: Actuated-Coordin	nated											
Maximum v/c Ratio: 0.70												
Intersection Signal Delay: 6.5				In	tersection L	LOS: A						
Intersection Capacity Utilization	n 88.2%			IC	CU Level of	Service E						
Analysis Period (min) 15												
# 95th percentile volume exc	eeds capaci	ty, queue n	nay be lon	ger.								
Queue shown is maximum a	after two cvo	les										

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 473 E of Page & Innes

→ø2 (R)	Ø4	
77 s	33 s 🔰 👘	
₩ Ø6 (R)	1 øs	
77 s	33.s	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ካካ	**	1	×.	**	1	X	**	1	5	**	1
Traffic Volume (vph)	596	1587	163	63	756	151	66	232	105	198	248	209
Future Volume (vph)	596	1587	163	63	756	151	66	232	105	198	248	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (m)	40.0		•	40.0			10.0		•	20.0		•
Lane Litil Factor	0.97	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00
Ped Bike Factor	0.99	0.00	0.94	1.00	0.00	0.97	0.99	0.00	0.96	0.98	0.00	0.97
Frt	0.00		0.850	1.00		0.850	0.00		0.850	0.00		0.850
Fit Protected	0 950		0.000	0 950		0.000	0 950		0.000	0 950		0.000
Satd Flow (prot)	3288	3357	1532	1712	3293	1517	1712	3390	1532	1712	3390	1532
Elt Permitted	0 950	0001	1002	0.950	0200	1017	0.456	0000	TOOL	0.607	0000	1002
Satd Flow (perm)	3262	3357	1446	1704	3293	1475	811	3390	1473	1072	3390	1480
Right Turn on Red	0202	0001	Yes	1704	0200	Yes	011	0000	Yes	1012	0000	Yes
Satd Flow (RTOR)			130			105			13/			209
Link Speed (k/b)		60	100		60	100		50	104		50	200
Link Distance (m)		264.5			101 /			387.7			301.0	
Travel Time (s)		15.0			20.5			27.0			21.7	
Confl Peds (#/br)	7	15.9	າງ	າງ	29.5	7	15	21.9	18	18	21.7	15
Confl. Picos (#/hr)	1		22	22		1	10		10	10		10
Book Hour Footor	1 00	1 00	1 00	1 00	1 00	1 00	1.00	1.00	1 00	1 00	1 00	1 00
	20/	30/	1.00	1.00	F.00	20/	1.00	20/	1.00	1.00	20%	1.00
Adi Flow (vob)	Z /0 506	1597	163	63	756	2 /0 151	66	2 /0	105	1/0	2/0	200
Auj. Flow (vpl) Shared Lane Traffic (%)	590	1507	105	03	750	101	00	232	105	190	240	209
	506	1507	162	62	756	151	66		105	100	010	200
Enter Blocked Intersection	090 No	No	No	00 No	700 No	No	No	ZJZ	No	190 No	240 No	209 No
		INU Loff			INU Loff			INU			INU Loff	
Lane Alignment	LINA	Leit	K INA	LINA		RINA	LINA	Leit	RINA	LINA	Leit	RINA
link Offeet(m)		9.0			7.4			0.0			0.0	
Crocowalk Width(m)		0.0 5.0			0.0 5.0			0.0 E 0			0.0 5.0	
		5.0			5.0			5.0			5.0	
Headway Easter	1.00	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/n)	24	0	14	24	0	14	24 1	0	14	24	0	14
Number of Detectors	 0 ^{ff}	Z	Diaht	10#	Z	Diaht	 0 ^{ff}	Z	Diaht	1.04	Z	Diaht
Detector Template		02.0		Leit	02.0		LUIL	02.0		10.C	02.0	
Leading Detector (m)	10.0	93.0	10.0	18.0	93.0	18.0	10.0	93.0	10.0	18.0	93.0	10.0
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)	19.6	0.0	19.6	19.6	0.0	19.6	19.6	0.0	19.6	19.6	0.0	19.6
Detector 1 Size(III)		0.0			0.0			0.0			0.5	
Detector 1 Channel	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	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 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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+EX			CI+EX			UI+EX			CI+EX	
Detector 2 Channel		0.0			0.0			0.0			0.0	
Detector 2 Extend (S)		0.0	D		0.0	D		0.0	P.	D	0.0	P
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	_	•	2		•	6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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	٭	-	\mathbf{r}	•	-	*	1	1	1	1	Ŧ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	35.0	71.0	71.0	12.0	48.0	48.0	12.0	47.0	47.0	35.0	35.0	35.0
Total Split (%)	26.9%	54.6%	54.6%	9.2%	36.9%	36.9%	9.2%	36.2%	36.2%	26.9%	26.9%	26.9%
Maximum Green (s)	28.4	64.8	64.8	5.8	41.8	41.8	5.3	40.3	40.3	28.3	28.3	28.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?		Ŭ	Ŭ		Ŭ	Ŭ				Ŭ	Ŭ	Ű
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		22	22		7	7		32	32	15	15	15
Act Effct Green (s)	26.9	68.1	68.1	6.1	47.0	47.0	36.7	36.7	36.7	27.1	27.1	27.1
Actuated g/C Ratio	0.21	0.52	0.52	0.05	0.36	0.36	0.28	0.28	0.28	0.21	0.21	0.21
v/c Ratio	0.88	0.90	0.20	0.79	0.64	0.23	0.25	0.24	0.21	0.89	0.35	0.44
Control Delay	64.9	37.4	4.7	103.7	46.1	10.5	35.4	35.6	3.3	87.3	45.2	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.9	37.4	4.7	103.7	46.1	10.5	35.4	35.6	3.3	87.3	45.2	8.6
LOS	E	D	A	F	D	В	D	D	A	F	D	A
Approach Delay		42.1		-	44.3	_	_	27.2			46.2	
Approach LOS		D			D			С			D	
Queue Lenath 50th (m)	69.7	182.3	2.8	15.2	78.0	1.9	11.2	21.3	0.0	45.2	26.2	0.0
Queue Length 95th (m)	#90.5	#232.7	13.4	#40.1	105.1	18.1	21.4	31.1	6.9	#84.0	37.7	18.5
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	718	1758	823	80	1189	657	265	1050	549	233	737	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.90	0.20	0.79	0.64	0.23	0.25	0.22	0.19	0.85	0.34	0.43
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 125 (96%), Reference	d to phase 2:	EBT and 6	:WBT, Sta	rt of Greer	า							
Natural Cycle: 115												
Control Type: Actuated-Coord	dinated											
Maximum v/c Ratio: 0.90												
Intersection Signal Delay: 41.	.8			In	ntersection	LOS: D						
Intersection Capacity Utilization	on 97.9%			IC	CU Level o	f Service F						
Analysis Period (min) 15												
# 95th percentile volume ex	ceeds capaci	ty, queue i	may be lon	ger.								
Queue shown is maximum	n after two cyo	cles.										
Splits and Phases: 1: Orlea	ans & Innes								-			
1								16	Plan			

€Ø1 →Ø2 (R)	↑ Ø3 ₽ Ø4	
2s 71s		12 s 35 s	
≯ _{Ø5}	Ø6 (R)	108	
Ss	48 s	47.s	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	*	**	1	*	**	1	*	**	1
Traffic Volume (vph)	131	526	25	28	1601	218	219	280	56	96	108	496
Future Volume (vph)	131	526	25	28	1601	218	219	280	56	96	108	496
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0			40.0			10.0			20.0		
Lane Litil Factor	40.0 0 97	0 95	1 00	1 00	0 95	1 00	1 00	0 95	1 00	1 00	0 95	1 00
Ped Bike Factor	1.00	0.55	0.06	0.00	0.55	0.07	0.00	0.55	0.04	0.07	0.55	0.08
Frt	1.00		0.50	0.55		0.57	0.55		0.54	0.57		0.50
Elt Protected	0.950		0.000	0.950		0.000	0.950		0.000	0.950		0.000
Satd Flow (prot)	2005	31//	1/73	1572	3357	1502	1712	3357	1502	1670	3357	1532
Elt Pormitted	2995	5144	1475	0.050	3337	1002	0.545	5557	1002	0.580	5557	1002
Satd Elow (porm)	2080	21//	1/16	1551	3357	1/63	0.045	3357	1/12	0.000	3357	1500
Dight Turn on Pod	2909	3144	1410 Voc	1001	3357	1403 Voc	975	3357	1413 Voc	992	3357	Voc
Satd Elow (PTOP)			1/2			1/2			82			120
Link Speed (k/b)		60	143		60	145		50	02		50	130
Link Speed (k/ii)		264 5			401.4			2077			201.0	
		204.0			491.4			307.7			301.9	
Capfl Dada (#/br)	6	15.9	11	11	29.5	6	6	27.9	20	20	Z1.7	6
Confil Peas. (#/hr)	0		14	14		0	0		32	32		0
Confil. Bikes (#/hr)	4 00	4 00	4 00	4.00	4 00	0	4 00	1 00	1 00	4 00	1 00	4.00
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 venicles (%)	12%	10%	5%	10%	3%	3%	1%	3%	3%	3%	3%	1%
Adj. Flow (vpn)	131	526	25	28	1601	218	219	280	50	96	108	496
Shared Lane Traffic (%)	404	500	05	00	4004	040	040	000	50	00	400	100
Lane Group Flow (vpn)	131	526	25	28	1601	218	219	280	56	96	108	496
Enter Blocked Intersection	NO	No	No	NO	NO	NO	No	NO	NO	No	NO	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		9.0			1.4			6.0			6.0	
		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
I wo way Left I urn Lane		4.00					4.00			4.00		4.00
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	<u>,</u>	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)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	Cl+Ex	CI+Ex	CI+Ex	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase										-		-
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	13.0	72.0	72.0	13.0	72.0	72.0	12.0	45.0	45.0	33.0	33.0	33.0
Total Split (%)	10.0%	55.4%	55.4%	10.0%	55.4%	55.4%	9.2%	34.6%	34.6%	25.4%	25.4%	25.4%
Maximum Green (s)	6.4	65.8	65.8	6.8	65.8	65.8	5.3	38.3	38.3	26.3	26.3	26.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?										, i i i i i i i i i i i i i i i i i i i		
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		14	14		6	6		32	32	6	6	6
Act Effct Green (s)	6.4	71.0	71.0	6.5	65.8	65.8	38.3	38.3	38.3	26.3	26.3	26.3
Actuated g/C Ratio	0.05	0.55	0.55	0.05	0.51	0.51	0.29	0.29	0.29	0.20	0.20	0.20
v/c Ratio	0.89	0.31	0.03	0.36	0.94	0.27	0.69	0.28	0.12	0.48	0.16	1.20
Control Delay	110.9	17.6	0.1	72.6	42.6	7.3	51.9	36.2	3.3	55.0	43.5	143.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.9	17.6	0.1	72.6	42.6	7.3	51.9	36.2	3.3	55.0	43.5	143.8
LOS	F	В	А	E	D	А	D	D	А	E	D	F
Approach Delay		34.8			38.9			39.1			116.2	
Approach LOS		С			D			D			F	
Queue Length 50th (m)	16.1	37.5	0.0	6.5	182.4	9.0	41.8	26.7	0.0	20.2	11.1	~114.6
Queue Length 95th (m)	#33.6	49.1	0.0	16.0	#232.8	22.0	63.6	37.9	4.6	37.0	18.7	#176.3
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	147	1717	838	82	1699	811	317	989	474	200	679	413
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.31	0.03	0.34	0.94	0.27	0.69	0.28	0.12	0.48	0.16	1.20
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to	phase 2:EBT	and 6:WE	T, Start of	Green								
Natural Cycle: 145												
Control Type: Actuated-Coord	dinated											
Maximum v/c Ratio: 1.20												
Intersection Signal Delay: 52.	5			In	tersection	LOS: D						
Intersection Capacity Utilization	on 108.9%			IC	CU Level o	f Service G						
Analysis Period (min) 15												
~ Volume exceeds capacity	, queue is the	oretically i	nfinite.									
Queue shown is maximum	after two cyc	les.										
# 95th percentile volume ex	ceeds capaci	ty, queue r	nay be lon	ger.								
Queue shown is maximum	after two cyc	les.										
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	A 12		7	41 2			4			4	
Traffic Volume (vph)	12	606	21	37	1646	20	14	12	38	34	9	43
Future Volume (vph)	12	606	21	37	1646	20	14	12	38	34	9	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	35.0			25.0			2.5			2.5		-
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			0.99			0.99	
Frt		0.995			0.998			0.920			0.932	
Flt Protected	0.950			0.950				0.989			0.981	
Satd Flow (prot)	1586	3129	0	1503	3349	0	0	1568	0	0	1596	0
Elt Permitted	0 107	0120	Ŭ	0 4 1 0	0010	Ŭ	Ŭ	0.922	•	v	0.851	U
Satd Flow (perm)	179	3129	0	646	3349	0	0	1458	0	0	1384	0
Right Turn on Red	170	0120	Yes	010	0010	Yes	U	1100	Yes	v	1001	Yes
Satd Flow (RTOR)		6	100		2	100		38	100		32	100
Link Speed (k/b)		0			60			40			/0	
Link Distance (m)		/01 /			236.7			212.5			273 /	
Travel Time (s)		20.5			1/ 2			10.1			2/0.4	
Confl Peds (#/br)	1	23.5	7	7	14.2	Λ	11	13.1			24.0	11
Confl. Pikos (#/hr)	4		1	I		4	11		1			1
Coniii. Bikes (#/iii)	1.00	1.00	1 00	1.00	1 00	1.00	1.00	1 00	1 00	1.00	1.00	1 00
	1.00	1.00	1.00 E0/	1.00	1.00	1.00 E0/	1.00	1.00	1.00	1.00	1.00	1.00
Adi Flow (upb)	970	10%	5%	10%	1646	5%	1 70	10%	3%	170	10%	370
Shared Lane Traffic (%)	IZ	000	21	37	1040	20	14	IZ	30	34	9	43
Lane Group Flow (yph)	12	627	0	37	1666	0	0	64	0	0	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Loft	Loft	Pight	Loft	Loft	Pight		Loff	D NA		Loft	
Median Width(m)	LEIL	5.0	Night	LEIL	5.0	Tight				LINA		
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		10.0			10.0			5.0			0.0 5.0	
		10.0			10.0			5.0			5.0	
Hoodway Easter	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/b)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Number of Detectors	24	2	14	2 4 1	C	14	2 4 1	2	14	2 4 1	2	14
Detector Tomplate	l off	Z		Loff	Z		Loft	Z		Loft	Z	
Loading Detector (m)	19.6	02.0		19.6	02.0		19.6	02.0		10.6	02.0	
Trailing Detector (III)	10.0	93.0		10.0	95.0		10.0	93.0		10.0	93.0	
Detector 1 Desition(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	19.6	0.0		19.6	0.0		19.6	0.0		19.6	0.0	
Detector 1 Size(iii)												
Detector 1 Channel	CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX	
Detector 1 Channel	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Exterio (s)	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	
Detector 1 Delay (S)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		07.5 F.F			87.5			87.5			07.5	
Detector 2 Size(M)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Channel		0.0			0.0			0.0			0.0	
Detector 2 Extend (s)	-	0.0		2	0.0		2	0.0		_	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2		_	6		^	8			4	
Permitted Phases	2	•		6	•		8	•		4		
Detector Phase	2	2		6	6		8	8		4	4	

2: Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	39.2	39.2		39.2	39.2		37.8	37.8		37.8	37.8	
Total Split (s)	82.0	82.0		82.0	82.0		38.0	38.0		38.0	38.0	
Total Split (%)	68.3%	68.3%		68.3%	68.3%		31.7%	31.7%		31.7%	31.7%	
Maximum Green (s)	75.8	75.8		75.8	75.8		31.2	31.2		31.2	31.2	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2			6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	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		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	7	7		4	4		1	1		11	11	
Act Effct Green (s)	88.6	88.6		88.6	88.6			18.4			18.4	
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.15			0.15	
v/c Ratio	0.09	0.27		0.08	0.67			0.25			0.36	
Control Delay	9.7	6.7		2.3	3.8			21.2			30.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	9.7	6.7		2.3	3.8			21.2			30.6	
LOS	A	A		A	A			C			C	
Approach Delay		6.8			3.8			21.2			30.6	
Approach LOS	0.4	A		<u> </u>	A			C			C	
Queue Length 50th (m)	0.4	13.5		0.7	32.0			5.4			11.4	
Queue Length 95th (m)	3.7	39.3		m0.8	14.0			14.4			21.6	
Internal Link Dist (m)	400.0	467.4		100.0	212.7			188.5			249.4	
Turn Bay Length (m)	100.0	0014		100.0	0.470			407			000	
Base Capacity (vph)	132	2311		4//	2473			407			383	
Starvation Cap Reductn	0	0		0	3			0			0	
Spillback Cap Reductin	0	0		0	0			0			0	
Storage Cap Reductin	0	0.07		0 00	0.07			0 10			0 00	
	0.09	0.27		0.08	0.67			0.10			0.22	
Intersection Summary	<u> </u>											
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 22 (18%), Referenced Natural Cycle: 90	to phase 2:E	BIL and 6:	WBTL, St	art of Gree	en							
Control Type: Actuated-Coord	dinated											
Maximum v/c Ratio: 0.67												
Intersection Signal Delay: 5.9				In	tersection	LOS: A						
Intersection Capacity Utilization	on 74.3%			IC	CU Level of	Service D						
Analysis Period (min) 15												
m Volume for 95th percentil	e queue is m	etered by u	pstream s	ignal.								

Splits and Phases: 2: Page & Innes



	-	\rightarrow	-	-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Lane Configurations	**	1	N	**	5	1	
Traffic Volume (vph)	539	176	179	1356	291	171	
Future Volume (vph)	539	176	179	1356	291	171	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)	1000	50.0	65.0	1000	70.0	70.0	
Storage Lanes		1	1		1	0.0	
Taper Length (m)		1	80.0		20.0	U	
Lane Litil Factor	0.95	1 00	1.00	0.05	1 00	1 00	
Ped Bike Factor	0.55	0.05	0.00	0.55	0.08	0.08	
Ert		0.95	0.55		0.90	0.50	
Fit Protoctod		0.000	0.050		0.050	0.000	
Soto Elow (prot)	2257	1500	1670	2257	1670	1500	
Salu. Flow (prot)	3357	1002	10/9	332 <i>1</i>	10/9	1502	
	2057	4400	0.420	0057	0.950	4 4 7 7	
Sato. Flow (perm)	3357	1433	744	3357	1650	1477	
Right Turn on Red		Yes				Yes	
Sata. Flow (RTOR)		1/6				1/1	
Link Speed (k/h)	60			60	50		
Link Distance (m)	236.7			238.7	204.5		
Travel Time (s)	14.2			14.3	14.7		
Confl. Peds. (#/hr)		11	11		5	5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	539	176	179	1356	291	171	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	539	176	179	1356	291	171	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	L NA	R NA	
Median Width(m)	5.0	Ŭ		5.0	3.7		
Link Offset(m)	0.0			0.0	0.0		
Crosswalk Width(m)	9.0			9.0	9.0		
Two way Left Turn Lane							
Headway Factor	1.06	1 06	1.06	1 06	1 06	1 06	
Turning Speed (k/h)	1.00	14	24	1.00	24	14	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Pight	Loft	Thru	Loft	Pight	
Leading Detector (m)	93.0	18.6	18.6	03.0	18.6	18.6	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Detector (III)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Fusition(III)	0.0	19.6	19.6	0.0	19.6	19.6	
Detector 1 Size(m)	5.5			5.5			
Detector Type	UI+EX	UI+EX	UI+EX	UI+EX	UI+EX	UI+EX	
	0.0	0.0	0.0	0.0	0.0	0.0	
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)	87.5			87.5			
Detector 2 Size(m)	5.5			5.5			
Detector 2 Type	CI+Ex			CI+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			6	4		3
Permitted Phases		2	6			8	
Detector Phase	2	2	6	6	4	8	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0
	10.0	10.0	10.0	10.0	0.0	10.0	0.0

	-	\rightarrow	1	+	1	1			
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3		
Minimum Split (s)	31.2	31.2	31.2	31.2	11.3	16.3	30.0		
Total Split (s)	73.0	73.0	73.0	73.0	17.0	47.0	30.0		
Total Split (%)	60.8%	60.8%	60.8%	60.8%	14.2%	39.2%	25%		
Maximum Green (s)	66.8	66.8	66.8	66.8	10.7	40.7	28.0		
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	2.0		
All-Red Time (s)	2.5	2.5	2.5	2.5	3.0	3.0	0.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.3	6.3			
Lead/Lag					Laq		Lead		
Lead-Lag Optimize?					3				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None		
Walk Time (s)	7.0	7.0	7.0	7.0			7.0		
Flash Dont Walk (s)	18.0	18.0	18.0	18.0			21.0		
Pedestrian Calls (#/hr)	10	10	10	10			10		
Act Effct Green (s)	67.8	67.8	67.8	67.8	27.7	39.7			
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.23	0.33			
v/c Ratio	0.28	0.20	0.43	0.72	0.75	0.28			
Control Delay	10.6	1.3	13.1	17.1	58.2	5.4			
Queue Delav	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	10.6	1.3	13.1	17.1	58.2	5.4			
LOS	В	A	В	В	E	A			
Approach Delay	8.3			16.7	38.7				
Approach LOS	A			В	D				
Queue Length 50th (m)	30.1	0.0	21.1	105.1	53.6	0.0			
Queue Length 95th (m)	20.7	2.1	24.6	128.3	#147.2	13.5			
Internal Link Dist (m)	212.7			214.7	180.5				
Turn Bay Length (m)		50.0	65.0		70.0	70.0			
Base Capacity (vph)	1896	886	420	1896	387	613			
Starvation Cap Reductn	0	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0	0			
Reduced v/c Ratio	0.28	0.20	0.43	0.72	0.75	0.28			
Intersection Summary									
Area Type:	Other								
Cycle Length: 120									
Actuated Cycle Length: 120									
Offset: 25 (21%), Referenced to Natural Cycle: 100	o phase 2:E	BT and 6:\	VBTL, Sta	rt of Greer	۱				
Control Type: Actuated-Coordin	nated								
Maximum v/c Ratio: 0.75									
Intersection Signal Delay: 18.2				In	tersection	LOS: B			
Intersection Capacity Utilization	n 67.0%			IC	CULevelo	f Service C			
Analysis Period (min) 15									
# 95th percentile volume exce	eeds capaci	tv. aueue r	nav be lon	aer.					
Queue shown is maximum a	after two cyc	les.		90.1					
Splits and Phases: 3: Lamare	che & Innes								
→ Ø2 (P)							1002	▲ 04	
73 s							30 s	17 s	
+									
🔻 🖉 Ø6 (R)							rø8		

47 s

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4: 473 E of Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	X	A 12		X	≜1 ⊾			4	1		4	
Traffic Volume (vph)	6	599	38	12	1534	4	99	0	39	1	0	3
Future Volume (vph)	6	599	38	12	1534	4	99	0	39	1	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	80.0		-	30.0		-	20.0		-	20.0		-
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	0.00	0.00		1.00	0.00		1.00	0.99		0.99	
Frt		0.991							0.850		0.899	
Flt Protected	0.950			0.950				0.950			0.988	
Satd Flow (prot)	1712	3115	0	1712	3357	0	0	1712	1532	0	1583	0
Flt Permitted	0 136	0110	Ŭ	0 409	0001	Ŭ	Ŭ	0 755	1002	Ŭ	0.942	Ŭ
Satd Flow (perm)	245	3115	0	737	3357	0	0	1357	1511	0	1509	0
Right Turn on Red	210	0110	Yes	101	0001	Yes	Ū	1001	Yes	U	1000	Yes
Satd Flow (RTOR)		12	100			100			.39		28	100
Link Speed (k/h)		60			60			40	00		40	
Link Distance (m)		238.7			292.8			151.9			62.6	
Travel Time (s)		14.3			17.6			13.7			5.6	
Confl Peds (#/hr)	7	14.5			17.0	7	2	10.7	1	1	0.0	2
Confl Bikes (#/hr)	I					1	2		1	1		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
	1%	1.00	1.00	1.00	3%	1%	1%	1%	1.00	1.00	1.00	1.00
Adi Flow (vob)	6	500	20	1/0	153/	170	00	170	30	1 /0	170	1/0
Shared Lane Traffic (%)	0	599	50	12	1004	4	99	U		1	0	J
Lang Group Flow (uph)	6	637	٥	10	1539	٥	٥	00	30	٥	1	٥
Enter Blocked Intersection	No	No	No	No	No	No	No	99 No	J9 No	No	4 No	No
		INU Loff			INU Loft			INU Loft			INU Loft	
Modian Width(m)	LINA	Een 5 0	IN INA	LINA	2.7	IN INA	LINA		n na	LINA		R INA
Link Offect(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		0.0			0.0			0.0			0.0	
		9.0			9.0			9.0			9.0	
Hoadway Easter	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Number of Detectors	24	2	14	24	2	14	24	2	14	24	2	14
Detector Templete	l off	Z		l off	Z		l off	Z	Diabt	l off	Z	
Loading Detector (m)	18.6	03.0		18.6	03.0		19.6	03.0	18.6	18.6	03.0	
Trailing Detector (m)	10.0	95.0		10.0	95.0		10.0	95.0	10.0	10.0	95.0	
Detector 1 Desition(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	18.6	0.0		18.6	0.0		18.6	0.0	18.6	18.6	0.0	
Detector 1 Type												
Detector 1 Channel								CITEX				
Detector 1 Extend (a)	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 Desition(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(iii)		07.0			07.3 E E			07.3 E E			07.3 E E	
Detector 2 Type		0.0 CL/EV			0.0 CL/Ev			0.0 CL/Ev			0.0 CL/EV	
Detector 2 Channel		CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Extend (a)		0.0			0.0			0.0			0.0	
Delector z Exteria (S)	Darre	0.0		Darm	0.0		Deres	0.0	Derm	Darm	0.0	
Turin Type	Perm	NA 0		Perm	INA C		Perm	IN/A	Perm	Perm	INA 4	
Protected Phases	0	2		6	6		0	ŏ	0	4	4	
Permitted Phases	2	^		6	•		ŏ	•	ŏ	4	4	
Detector Phase	2	2		6	6		8	8	8	4	4	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	87.0	87.0		87.0	87.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	72.5%	72.5%		72.5%	72.5%		27.5%	27.5%	27.5%	27.5%	27.5%	
Maximum Green (s)	80.9	80.9		80.9	80.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	1	1		7	7		1	1	1	2	2	
Act Effct Green (s)	92.0	92.0		92.0	92.0			15.6	15.6		15.6	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.13	0.13		0.13	
v/c Ratio	0.03	0.27		0.02	0.60			0.56	0.17		0.02	
Control Delay	4.7	4.0		4.9	8.1			59.7	14.0		0.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	4.7	4.0		4.9	8.1			59.7	14.0		0.2	
LOS	A	A		A	A			E	В		A	
Approach Delay		4.0			8.0			46.8			0.3	
Approach LOS		A			A			D			A	
Queue Length 50th (m)	0.2	14.0		0.5	59.7			20.8	0.0		0.0	
Queue Length 95th (m)	m1.2	23.0		2.6	114.5			33.3	8.3		0.0	
Internal Link Dist (m)		214.7		10.0	268.8			127.9			38.6	
Turn Bay Length (m)	65.0	0000		40.0	0570			004	000		0	
Base Capacity (vph)	187	2389		564	2572			301	366		357	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductin	0	0		0	0			0	0		0	
Storage Cap Reductn	0 00	0 07		0	0			0	0		0	
Reduced V/c Ratio	0.03	0.27		0.02	0.60			0.33	0.11		0.01	
	0.1											
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120				()								
Offset: 3 (3%), Referenced to Natural Cycle: 75	phase 2:EB1	L and 6:W	BTL, Start	of Green								
Control Type: Actuated-Coord	linated											
Maximum v/c Ratio: 0.60												
Intersection Signal Delay: 9.2				In	tersection	LOS: A						
Intersection Capacity Utilization	on 68.0%			10	CU Level of	Service C						
Analysis Period (min) 15						20.100 0						
m Volume for 95th percentil	e queue is m	etered by u	pstream si	ignal.								

Splits and Phases: 4: 473 E of Page & Innes



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	88	**	1	×	**	1	*	**	1	*	**	1
Traffic Volume (vph)	131	526	25	28	1571	218	219	280	56	96	108	346
Future Volume (vph)	131	526	25	28	1571	218	219	280	56	96	108	346
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0		•	40.0			10.0			20.0		•
Lane Litil Factor	0.97	0 95	1 00	1 00	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00
Ped Bike Factor	1.00	0.00	0.96	0.99	0.00	0.97	0.99	0.00	0.94	0.97	0.00	0.98
Frt	1.00		0.850	0.00		0.850	0.00		0.850	0.01		0.50
Fit Protected	0.950		0.000	0 950		0.000	0 950		0.000	0 950		0.000
Satd Flow (prot)	2005	31//	1/73	1572	3357	1502	1712	3357	1502	1679	3357	1532
Elt Permitted	0.050		1775	0.050	0001	1002	0.533	0001	1002	0.580	0001	1002
Sate Flow (parm)	2088	21//	1/16	1551	2257	1/63	0.000	3357	1/12	0.000	3357	1500
Dight Turn on Pod	2900	5144	1410 Voc	1001	3337	1403 Voc	904	5557	1413 Voc	992	5557	Voc
Sate Flow (PTOP)			1/2			1/3			82			120
Link Speed (k/b)		60	145		60	145		50	02		50	150
Link Distance (m)		264.5			401.4			2077			201.0	
		204.0			491.4			07.0			01.9 01.7	
Confl Dodo (#/br)	6	15.9	11	11	29.5	6	6	27.9	20	20	Z1.7	6
Confil. Peds. (#/hr)	b		14	14		0	0		32	32		0
Confil. Bikes (#/nr)	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
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 Venicles (%)	12%	10%	5%	10%	3%	3%	1%	3%	3%	3%	3%	1%
Adj. Flow (Vpn)	131	526	25	28	1571	218	219	280	50	96	108	340
	404	500	05	00	4574	040	040	000	50	00	400	0.40
Lane Group Flow (vpn)	131	526	25	28	1571	218	219	280	56	96	108	346
Enter Blocked Intersection	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		9.0			7.4			6.0			6.0	
		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
I wo way Left I urn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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	Ihru	Right	Left	l hru	Right	Left	Ihru	Right	Left	l hru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	CI+Ex	CI+Ex	Cl+Ex	CI+Ex	CI+Ex	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	13.0	72.0	72.0	13.0	72.0	72.0	12.0	45.0	45.0	33.0	33.0	33.0
Total Split (%)	10.0%	55.4%	55.4%	10.0%	55.4%	55.4%	9.2%	34.6%	34.6%	25.4%	25.4%	25.4%
Maximum Green (s)	6.4	65.8	65.8	6.8	65.8	65.8	5.3	38.3	38.3	26.3	26.3	26.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?		Ŭ	Ū		Ŭ	Ŭ				Ŭ	Ţ	Ŭ
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		14	14		6	6		32	32	6	6	6
Act Effct Green (s)	7.4	73.6	73.6	6.5	67.4	67.4	35.7	35.7	35.7	23.7	23.7	23.7
Actuated g/C Ratio	0.06	0.57	0.57	0.05	0.52	0.52	0.27	0.27	0.27	0.18	0.18	0.18
v/c Ratio	0.78	0.30	0.03	0.36	0.90	0.26	0.75	0.30	0.12	0.53	0.18	0.90
Control Delay	89.3	16.7	0.1	72.6	37.4	7.2	57.6	37.7	3.4	58.6	44.5	56.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.3	16.7	0.1	72.6	37.4	7.2	57.6	37.7	3.4	58.6	44.5	56.6
LOS	F	В	А	E	D	А	E	D	А	E	D	E
Approach Delay		30.1			34.3			42.1			54.6	
Approach LOS		С			С			D			D	
Queue Length 50th (m)	16.1	37.5	0.0	6.5	176.0	9.0	41.8	26.7	0.0	20.2	11.1	49.2
Queue Length 95th (m)	#33.6	49.1	0.0	16.0	#217.1	22.0	#63.6	37.9	4.6	37.0	18.7	#94.7
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	169	1779	863	82	1740	827	292	989	474	200	679	413
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.30	0.03	0.34	0.90	0.26	0.75	0.28	0.12	0.48	0.16	0.84
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to	phase 2:EBT	and 6:WE	BT, Start of	Green								
Natural Cycle: 115												
Control Type: Actuated-Coord	dinated											
Maximum v/c Ratio: 0.90												
Intersection Signal Delay: 37.	8			lr	ntersection	LOS: D						
Intersection Capacity Utilization	on 98.2%			IC	CU Level o	f Service F						
Analysis Period (min) 15												
# 95th percentile volume ex	ceeds capaci	ty, queue i	may be lon	ger.								
Queue shown is maximum	n after two cyc	cles.										
Splits and Phases: 1: Orlea	ans & Innes											
							1	e	10			8

 Ø1
 Ø2 (R)

 13s
 72 s

 Ø5
 Ø6 (R)

 13s
 72 s

 13s
 72 s
	٦	-	\mathbf{r}	4	-	•	1	Ť	1	1	Ļ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	*	**	1	×	**	1	×	**	1
Traffic Volume (vph)	625	1866	171	66	834	170	69	243	109	221	260	219
Future Volume (vph)	625	1866	171	66	834	170	69	243	100	221	260	210
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0		I	10 0			10.0			20.0		
Lane Litil Factor	0.0	0.05	1 00	1 00	0.05	1 00	1 00	0.05	1 00	1 00	0.05	1 00
Ped Bike Factor	0.07	0.55	0.07	1.00	0.55	0.07	0.00	0.55	0.06	0.08	0.55	0.07
Frt	0.33		0.54	1.00		0.57	0.33		0.50	0.30		0.57
Elt Protected	0.050		0.000	0.950		0.000	0.950		0.000	0.050		0.000
Satd Flow (prot)	3288	3357	1532	1712	3203	1517	1712	3300	1532	1712	3300	1532
Elt Pormitted	0.050	5557	1002	0.050	5255	1017	0.450	3330	1002	0.601	3330	1002
Satd Elow (porm)	2265	3357	1116	1706	3003	1/75	0.450 800	3300	1/72	1062	3300	1/20
Dight Turn on Pod	5205	5557	1440 Voc	1700	5295	1475 Voc	000	3390	1473 Voc	1002	3390	1400 Voc
Satd Elow (PTOP)			120			105			124			210
Link Speed (k/b)		60	139		60	195		50	134		50	219
Link Speed (k/ii)		264 5			401.4			2077			201.0	
		204.0			491.4			307.7			JUI.9	
Confl Dodo (#/br)	7	15.9	20	22	29.5	7	15	21.9	10	10	21.7	15
Confl. Peas. (#/hr)	1		22	22		1	10		10	10		10
Confil. Bikes (#/nr)	1 00	1 00	4	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
	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% 005	3%	170	1%	5%	Z%	1%	Z%	100	1%	2% 200	1%
Adj. Flow (vpn)	625	1866	171	60	834	170	69	243	109	221	260	219
Shared Lane Traffic (%)	005	4000	474	00	004	470	00	040	400	004	000	040
Lane Group Flow (vpn)	625 No	1866	1/1	00	834	170	69	243	109	ZZT	260	219
Enter Blocked Intersection	INO	INO	INO	INO	INO	INO	INO	INO	INO	INO	INO	INO
Lane Alignment	L NA	Len	RNA	LNA	Lett	RNA	LNA	Len	R NA	L NA	Lett	RNA
Median Width(m)		9.0			7.4			6.0			6.0	
		0.0			0.0			0.0			0.0	
		5.0			5.0			5.0			5.0	
I wo way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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	0	14	24	0	14	24	0	14	24	0	14
Number of Detectors	1	- 2	1	1	2	1	1	2	1	1	- 2	1
Detector Template	Left	Inru	Right	Left	I hru	Right	Left	Inru	Right	Left	Inru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	_	_ ·	0.0	-		0.0	_	_	0.0	_
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6	_	3	8			4	
Permitted Phases			2			6	8	_	8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase										-		
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	35.0	71.0	71.0	12.0	48.0	48.0	12.0	47.0	47.0	35.0	35.0	35.0
Total Split (%)	26.9%	54.6%	54.6%	9.2%	36.9%	36.9%	9.2%	36.2%	36.2%	26.9%	26.9%	26.9%
Maximum Green (s)	28.4	64.8	64.8	5.8	41.8	41.8	5.3	40.3	40.3	28.3	28.3	28.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?		Ŭ	Ū		Ū	Ū				, j	Ŭ	
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		22	22		7	7		32	32	15	15	15
Act Effct Green (s)	27.4	66.6	66.6	6.3	45.1	45.1	38.0	38.0	38.0	28.4	28.4	28.4
Actuated g/C Ratio	0.21	0.51	0.51	0.05	0.35	0.35	0.29	0.29	0.29	0.22	0.22	0.22
v/c Ratio	0.90	1.09	0.21	0.80	0.73	0.27	0.25	0.25	0.21	0.95	0.35	0.44
Control Delay	67.5	80.2	5.1	106.0	54.9	13.2	35.3	35.1	3.8	98.5	44.6	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.5	80.2	5.1	106.0	54.9	13.2	35.3	35.1	3.8	98.5	44.6	8.3
LOS	E	F	А	F	D	В	D	D	А	F	D	A
Approach Delay		72.4			51.5			27.0			50.3	
Approach LOS		E			D			С			D	
Queue Length 50th (m)	73.9	~265.5	3.8	16.0	108.1	8.3	11.7	22.4	0.0	51.9	27.5	0.0
Queue Length 95th (m)	#100.5	#304.2	14.7	#42.2	114.4	20.8	22.3	32.3	7.6	#97.8	39.4	18.7
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	718	1719	808	82	1142	639	271	1050	549	232	741	494
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	1.09	0.21	0.80	0.73	0.27	0.25	0.23	0.20	0.95	0.35	0.44
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 125 (96%), Reference	d to phase 2:	EBT and 6	:WBT, Sta	rt of Greer	ı							
Natural Cycle: 145												
Control Type: Actuated-Coord	linated											
Maximum v/c Ratio: 1.09												
Intersection Signal Delay: 60.	7			In	ntersection	LOS: E						
Intersection Capacity Utilization	on 107.4%			IC	CU Level o	f Service G						
Analysis Period (min) 15												
~ Volume exceeds capacity	, queue is the	oretically i	nfinite.									
Queue shown is maximum	after two cyc	les.										
# 95th percentile volume ex	ceeds capaci	ty, queue i	may be lon	ger.								
Queue shown is maximum	after two cyc	les.										
Splits and Phases: 1: Orlea	ins & Innes											
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	N	≜1 ⊾		<u>8</u>	≜1 ⊾			4			4	
Traffic Volume (vph)	63	1912	30	93	943	64	23	7	77	54	18	36
Future Volume (vph)	63	1912	30	93	943	64	23	7	77	54	18	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	35.0		-	25.0		-	2.5		-	2.5		-
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	0.00		1.00	0.00		0.98			0.99	
Frt	1.00	0.998			0.990			0.903			0.955	
Elt Protected	0.950			0.950	0.000			0.989			0.976	
Satd Flow (prot)	1695	3380	0	1695	3259	0	0	1541	0	0	1578	0
Elt Permitted	0 285	0000	Ŭ	0.044	0200	Ŭ	Ŭ	0.917	•	Ŭ	0 754	U
Satd Flow (perm)	506	3380	0	79	3259	0	0	1427	0	0	1211	0
Right Turn on Red	000	0000	Yes	10	0200	Yes	Ū	1121	Yes	Ū	1211	Yes
Satd Flow (RTOR)		2	100		11	100		77	100		18	100
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		491.4			236.7			212.5			273 4	
Travel Time (s)		29.5			14.2			19.1			210.4	
Confl Peds (#/hr)	g	23.5	5	5	17.2	Q	5	15.1	13	13	24.0	5
Confl Bikes (#/hr)	5		1	5		5	5		1	10		5
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%	6%	2%	5%	2%	5%	1%	3%	6%	1.00	11%
Adi Elow (vph)	63	1012	30	2 /0	0/3	2 /0	J /0	1/0	J /0 77	5/	1/0	36
Shared Lane Traffic (%)	03	1912	50	90	940	04	20	1	11	04	10	50
Lano Group Flow (vph)	63	10/2	٥	03	1007	٥	٥	107	٥	٥	108	٥
Enter Blocked Intersection	No	No	No	90 No	No	No	No	No	No	No	No	No
Long Alignment	INU Loff	INU	Dicht	INU Loff	INU Loff	Diabt		INU Loff			INU	
Lane Alignment Medica Width(m)	Leit	Leil	Right	Leit	Leit	Right	LINA		RINA	LINA		RINA
Link Offect(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		10.0			10.0			0.0 5.0			0.0 5.0	
		10.0			10.0			5.0			5.0	
Hoodway Easter	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Number of Detectors	24	n	14	24	2	14	24	2	14	24 1	n	14
Number of Detectors	 0 ^{ff}	Z		104	Z		ا ام#	Z		l off	Z	
Leading Detector (m)	19.6	02.0		19.6	02.0		19.6	02.0		19.6	02.0	
Trailing Detector (m)	10.0	93.0		0.0	93.0		10.0	93.0		10.0	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	19.6	0.0		10.0	0.0		19.6	0.0		19.6	0.0	
Detector 1 Size(iii)												
Detector 1 Channel	CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX	
Detector 1 Channel	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Extend (s)	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	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		01.5			07.5			0/.5			01.5	
Detector 2 Size(M)		5.5			5.5			5.5			5.5	
		CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Channel		0.0			0.0			0.0			0.0	
Detector 2 Extend (s)	P	0.0			0.0		D.	0.0		D.	0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	^	2		1	6		^	8		4	4	
Permitted Phases	2	^		6	^		8	•		4		
Detector Phase	2	2		1	6		8	8		4	4	

2: Page & Innes PM Peak Hour

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	•	-	\mathbf{r}	1	-	•	1	Ť	1	•	Ŧ	-
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	39.2	39.2		11.2	39.2		37.8	37.8		37.8	37.8	
Total Split (s)	80.0	80.0		12.0	92.0		38.0	38.0		38.0	38.0	
Total Split (%)	61.5%	61.5%		9.2%	70.8%		29.2%	29.2%		29.2%	29.2%	
Maximum Green (s)	73.8	73.8		5.8	85.8		31.2	31.2		31.2	31.2	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2			6.8			6.8	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	15.0	15.0			15.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	18.0	18.0			18.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	5	5			9		13	13		5	5	
Act Effct Green (s)	84.5	84.5		97.4	97.4			19.6			19.6	
Actuated g/C Ratio	0.65	0.65		0.75	0.75			0.15			0.15	
v/c Ratio	0.19	0.88		0.65	0.41			0.38			0.55	
Control Delay	3.1	6.5		57.8	4.3			18.9			50.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	3.1	6.5		57.8	4.3			18.9			50.4	
LOS	А	А		E	А			В			D	
Approach Delay		6.4			8.9			18.9			50.4	
Approach LOS		А			А			В			D	
Queue Length 50th (m)	1.5	33.6		8.7	21.2			6.5			20.8	
Queue Length 95th (m)	m2.1	m33.1		m#32.6	25.6			19.7			33.7	
Internal Link Dist (m)		467.4			212.7			188.5			249.4	
Turn Bay Length (m)	100.0			100.0								
Base Capacity (vph)	328	2196		143	2444			401			304	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.19	0.88		0.65	0.41			0.27			0.36	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 122 (94%), Reference	d to phase 2:I	EBTL and 6	5:WBTL, St	art of Gre	en							
Natural Cycle: 130												
Control Type: Actuated-Coord	linated											
Maximum v/c Ratio: 0.88												
Intersection Signal Delay: 9.1				In	tersection	LOS: A						
Intersection Capacity Utilization	on 93.5%			IC	CU Level of	Service F						
Analysis Period (min) 15												
# 95th percentile volume ex	ceeds capaci	ty, queue n	nay be long	jer.								
Queue shown is maximum	after two cyc	les.										

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Page & Innes



	-	\rightarrow	-	-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Lane Configurations	**	1	X	**	×	1	
Traffic Volume (vph)	1589	324	177	942	217	205	
Future Volume (vph)	1589	324	177	942	217	205	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		50.0	65.0		70.0	70.0	
Storage Lanes		1	1		1	0	
Taper Length (m)			80.0		20.0		
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Ped Bike Factor		0.96					
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	3357	1502	1679	3357	1679	1502	
Flt Permitted			0.088		0.950		
Satd. Flow (perm)	3357	1449	155	3357	1679	1502	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		236				35	
Link Speed (k/h)	60			60	50		
Link Distance (m)	236.7			238.7	204.5		
Travel Time (s)	14.2			14.3	14.7		
Confl. Peds. (#/hr)		6	6				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	1589	324	177	942	217	205	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1589	324	177	942	217	205	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	L NA	R NA	
Median Width(m)	5.0			5.0	3.7		
Link Offset(m)	0.0			0.0	0.0		
Crosswalk Width(m)	9.0			9.0	9.0		
Two way Left Turn Lane							
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	
Turning Speed (k/h)		14	24		24	14	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6	
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)	5.5	18.6	18.6	5.5	18.6	18.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+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)	87.5			87.5			
Detector 2 Size(m)	5.5			5.5			
Detector 2 Type	CI+Ex			CI+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0	_	_	0.0	_	-	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2	_	_	6	4	_	3
Permitted Phases	-	2	6			8	
Detector Phase	2	2	6	6	4	8	
Switch Phase		40.0					- ^
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0

	-	\mathbf{r}	-	-	1	1				
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3			
Minimum Split (s)	31.2	31.2	31.2	31.2	11.3	37.3	30.0			
Total Split (s)	88.0	88.0	88.0	88.0	12.0	42.0	30.0			
Total Split (%)	67.7%	67.7%	67.7%	67.7%	9.2%	32.3%	23%			
Maximum Green (s)	81.8	81.8	81.8	81.8	5.7	35.7	28.0			
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	2.0			
All-Red Time (s)	2.5	2.5	2.5	2.5	3.0	3.0	0.0			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.3	6.3				
Lead/Lag					Lag		Lead			
Lead-Lag Optimize?					Ŭ					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None			
Walk Time (s)	7.0	7.0	7.0	7.0			7.0			
Flash Dont Walk (s)	18.0	18.0	18.0	18.0			21.0			
Pedestrian Calls (#/hr)	10	10	10	10			10			
Act Effct Green (s)	82.4	82.4	82.4	82.4	23.1	35.1				
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.18	0.27				
v/c Ratio	0.75	0.32	1.81	0.44	0.73	0.48				
Control Delay	3.4	0.6	420.9	9.9	65.2	37.0				
Queue Delay	0.3	0.0	0.0	0.0	0.0	0.0				
I otal Delay	3.7	0.6	420.9	9.9	65.2	37.0				
LOS	A	A	F	A	E	D				
Approach Delay	3.2			74.9	51.5					
Approach LOS	A	0.4	00.0	E	D	04.0				
Queue Length 50th (m)	16.0	0.1	~62.8	35.1	44.3	34.6				
Queue Length 95th (m)	12.1	m0.0	#106.3	39.8	#134.4	55.3				
Internal Link Dist (m)	212.7	50.0	05.0	214.7	180.5	70.0				
Turn Bay Length (m)	0400	50.0	65.0	0400	/0.0	/0.0				
Base Capacity (Vpn)	2128	1005	98	2128	297	437				
Starvation Cap Reductin	124	0	0	0	0	0				
Spillback Cap Reductin	0	0	0	0	0	0				
Bedueed v/e Betie	0 70	0 22	1 01	0.44	0 72	0.47				
Reduced V/C Rallo	0.79	0.32	1.01	0.44	0.75	0.47				
Intersection Summary	Other									
Area Type:	Other									
Actuated Cycle Longth: 130										
Offect: 120 (00%) Referenced	to phase 2.1	EDT and 6		art of Grad	n					
Natural Cycle: 150	10 phase 2.1				511					
Control Type: Actuated Coordi	nated									
Maximum v/c Ratio: 1.81	ndleu									
Intersection Signal Delay: 32.3				Ir	tersection	108.0				
Intersection Canacity Utilization	n 85.0%			 (f Service F				
Analysis Period (min) 15										
 Volume exceeds capacity. 	queue is the	oretically i	nfinite.							
Queue shown is maximum	after two cvc	les.								
# 95th percentile volume exc	eeds capaci	y, queue r	may be lon	ger.						
Queue shown is maximum	after two cyc	les.								
m Volume for 95th percentile	queue is me	etered by u	upstream s	ignal.						

Splits and Phases: 3: Lamarche & Innes

→Ø2 (R)	# k ø3	104
88 s	30 s	12 s
₩ Ø6 (R)	r@8	
88 s	42 s	

4: 473 E of Page & Innes PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Υ.	A 12		1	≜1 6			ا	1		4	
Traffic Volume (vph)	8	1866	131	67	1059	8	88	0	56	4	0	10
Future Volume (vph)	8	1866	131	67	1059	8	88	0	56	4	0	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	80.0			30.0			20.0			20.0		
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	
Frt		0.990			0.999				0.850		0.904	
Elt Protected	0.950			0.950				0.950			0.986	
Satd Flow (prot)	1712	3353	0	1712	3322	0	0	1712	1381	0	1587	0
Elt Permitted	0.251	0000	Ŭ	0.070	0022	Ŭ	v	0 748	1001	v	0.920	Ŭ
Satd Flow (perm)	452	3353	0	126	3322	0	0	1342	1381	0	1481	0
Right Turn on Red	102	0000	Yes	120	UULL	Yes	Ū	1012	Yes	U	1101	Yes
Satd Flow (RTOR)		13	100		1	100			29		26	100
Link Speed (k/b)		60			60			/0	25		/0	
Link Distance (m)		238.7			292.8			151 0			62.6	
Travel Time (s)		200.7			17.6			131.3			5.6	
Confl Peds (#/br)		14.5	2	2	17.0		3	15.7			5.0	3
Confl. Pikos (#/hr)			2 1	2			5					J
Dook Hour Footor	1 00	1.00	1 00	1.00	1.00	1 00	1 00	1.00	1 00	1 00	1 00	1 00
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adi Flow (upb)	1 70 O	1066	170	67	4 70	1 70	00	170	1270	1 70	170	170
Auj. Flow (vpl)	0	1000	131	07	1059	0	00	U	00	4	U	10
Shared Lane Traffic (%)	0	1007	0	67	1007	0	0	00	50	0	11	0
Lane Group Flow (vpn)	Ö Nia	1997	U	0/ N-	1007	U	U	00	00	U	14	U
Enter Blocked Intersection	INO	INO	INO	INO	INO	INO	INO	INO	INO D NIA	INO	INO	INO D NIA
	L NA	Lett	R NA	L NA	Lett	RNA	LNA	Len	R NA	L NA	Left	R NA
Median Width(m)		5.0			3.7			0.0			0.0	
		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
I wo way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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	0	14	24	•	14
Number of Detectors	1	2		1	2		1	- 2	1	1	2	
Detector Template	Left	Ihru		Left	Ihru		Left	Ihru	Right	Left	l hru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0	18.6	18.6	93.0	
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)	18.6	5.5		18.6	5.5		18.6	5.5	18.6	18.6	5.5	
Detector 1 Type	CI+Ex	Cl+Ex		Cl+Ex	Cl+Ex		CI+Ex	CI+Ex	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		8	8	8	4	4	

J.Audia, Novatech

4: 473 E of Page & Innes PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	97.0	97.0		97.0	97.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	74.6%	74.6%		74.6%	74.6%		25.4%	25.4%	25.4%	25.4%	25.4%	
Maximum Green (s)	90.9	90.9		90.9	90.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	2	2		1	1		1	1	1	3	3	
Act Effct Green (s)	102.1	102.1		102.1	102.1			15.5	15.5		15.5	
Actuated g/C Ratio	0.79	0.79		0.79	0.79			0.12	0.12		0.12	
v/c Ratio	0.02	0.76		0.68	0.41			0.55	0.29		0.07	
Control Delay	2.1	3.6		47.6	5.5			65.5	31.1		7.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	2.1	3.6		47.6	5.5			65.5	31.1		7.4	
LOS	А	А		D	А			E	С		А	
Approach Delay		3.6			8.0			52.1			7.4	
Approach LOS		А			А			D			А	
Queue Length 50th (m)	0.2	27.4		5.6	32.4			20.2	5.9		0.0	
Queue Length 95th (m)	m0.4	36.3		#39.0	63.5			32.7	16.2		2.9	
Internal Link Dist (m)		214.7			268.8			127.9			38.6	
Turn Bay Length (m)	65.0			40.0								
Base Capacity (vph)	355	2636		98	2609			275	306		324	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.02	0.76		0.68	0.41			0.32	0.18		0.04	
Intersection Summary	Other											
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Uffset: 4 (3%), Referenced to	pnase ZEBI	L and 6:W	BTL, Start	of Green								
Natural Cycle: 90	lu ata d											
Movimum v/o Datia: 0.70	mated											
Iviaximum V/c Ratio: 0.76					4							
Intersection Signal Delay: 7.3	m 00 40/			In		LUS: A						
Intersection Capacity Utilizatio	011 92.4%			IC	O Level of	Service F						
Analysis Period (min) 15		h	on he le -	~~~								
# 95th percentile volume exc	ceeus capaci	iy, queue n	nay be ion	yer.								

Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 473 E of Page & Innes

→ø2 (R)	Ø4
97 s	33 s
₩ Ø6 (R)	1 Ø8
97 s	33 s

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	88	**	1	*	**	1	5	**	1	*	**	1
Traffic Volume (vph)	625	1586	171	66	834	170	69	243	109	191	260	219
Future Volume (vph)	625	1586	171	66	834	170	69	243	109	191	260	219
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40 0		•	40.0		•	10.0		•	20.0		•
Lane Litil Factor	0.97	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00
Ped Bike Factor	0.07	0.00	0.94	1.00	0.00	0.97	0.99	0.00	0.96	0.98	0.00	0.97
Frt	0.00		0.850	1.00		0.850	0.00		0.50	0.00		0.57
Fit Protected	0.950		0.000	0.950		0.000	0.950		0.000	0.950		0.000
Satd Flow (prot)	3288	3357	1532	1712	3203	1517	1712	3300	1532	1712	3300	1532
Elt Permitted	0 050	5551	1002	0.050	5255	1017	0.442	0000	1552	0.601	0000	1002
Sate Flow (parm)	3265	3357	1116	1704	3003	1/75	786	3300	1/72	1062	3300	1/100
Bight Turn on Pod	5205	5557	1440 Voc	1704	5295	1475 Voc	700	3390	1473 Voc	1002	2290	1400 Voc
Sate Flow (PTOP)			1/1			105			124			210
Link Speed (k/b)		60	141		60	195		50	104		50	213
Link Opeed (K/II)		00			401.4			2077			201.0	
		204.0			491.4			JOI.I			301.9	
Confl Dada (#/hr)	7	15.9	00	00	29.5	7	15	27.9	10	10	Z1.7	45
Confil. Peas. (#/nr)	1		22	22		1	15		10	Ið		15
Confi. Bikes (#/nf)	1 00	1.00	4	4 00	1 00	3	4.00	1 00	4 00	4 00	4 00	4 00
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 venicles (%)	2%	3%	1%	1%	5%	2%	1%	2%	1%	1%	2%	1%
Adj. Flow (vpn)	625	1586	171	66	834	170	69	243	109	191	260	219
Shared Lane Traffic (%)	005	4500	474	00	004	470	00	0.40	400	404	000	040
Lane Group Flow (vpn)	625	1586	171	66	834	170	69	243	109	191	260	219
Enter Blocked Intersection	NO	No	NO	NO	NO	NO	NO	NO	NO	NO	No	NO
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		9.0			(.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Iwo way Left Turn Lane		1.00			4.00					1.00		
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	<u>,</u>	14	24	<u>,</u>	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)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	CI+Ex	Cl+Ex	Cl+Ex	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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Lane Group	FBI	FBT	FBR	WBI	WBT	WBR	NBI	NBT	NBR	SBI	SBT	SBR
Switch Phase							HBE			001		
Minimum Initial (s)	50	10.0	10.0	5.0	10.0	10.0	50	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	35.0	71.0	71.0	12.0	48.0	48.0	12.0	47.0	47.0	35.0	35.0	35.0
Total Split (%)	26.9%	54.6%	54.6%	9.2%	36.9%	36.9%	9.2%	36.2%	36.2%	26.9%	26.9%	26.9%
Maximum Green (s)	28.4	64.8	64.8	5.8	41.8	41.8	5.3	40.3	40.3	28.3	28.3	28.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?		Ū	Ŭ		Ŭ	0				Ŭ	Ŭ	Ŭ
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		22	22		7	7		32	32	15	15	15
Act Effct Green (s)	27.4	68.2	68.2	6.3	46.7	46.7	36.5	36.5	36.5	26.9	26.9	26.9
Actuated g/C Ratio	0.21	0.52	0.52	0.05	0.36	0.36	0.28	0.28	0.28	0.21	0.21	0.21
v/c Ratio	0.90	0.90	0.21	0.80	0.71	0.26	0.27	0.26	0.21	0.87	0.37	0.46
Control Delay	67.5	37.3	5.0	108.7	38.6	6.1	35.8	36.0	3.8	84.8	45.6	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.5	37.3	5.0	108.7	38.6	6.1	35.8	36.0	3.8	84.8	45.6	8.6
LOS	E	D	А	F	D	А	D	D	А	F	D	A
Approach Delay		42.9			37.7			27.6			44.7	
Approach LOS		D			D			С			D	
Queue Length 50th (m)	73.9	182.0	3.5	15.9	76.2	2.4	11.7	22.4	0.0	43.4	27.5	0.0
Queue Length 95th (m)	#100.5	#232.5	14.4	#42.3	107.5	11.9	22.3	32.3	7.6	#80.6	39.4	18.7
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	718	1760	825	82	1182	654	258	1050	549	231	737	493
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.90	0.21	0.80	0.71	0.26	0.27	0.23	0.20	0.83	0.35	0.44
Intersection Summary												
	Other											
Cycle Length: 130	Other											
Actuated Cycle Length: 130												
Offset: 125 (96%) Reference	nd to phase 2.	EBT and 6	WRT Sta	rt of Green	n							
Natural Cycle: 115					1							
Control Type: Actuated-Coor	dinated											
Maximum v/c Ratio: 0.90	anatoa											
Intersection Signal Delay: 40	5			Ir	tersection							
Intersection Canacity Utilizat	ion 97 5%			10		f Service F						
Analysis Period (min) 15	1011 07 10 70			I.								
# 95th percentile volume e	xceeds canaci	itv. queue	may be lon	aer.								
Queue shown is maximur	n after two cyc	cles.		J - · ·								
Splits and Phases: 1. Orle	ans & Innes											
							4	1				8
at	_						-	a2	- CA4			

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2s 71s		12.s 35.s	
ØS	📕 📥 🖉 🖉 🖉	¶ø8	
S S	48 s	47.s	

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø8	
Lane Configurations	**	1	r.	**	μ.	1			
Traffic Volume (vph)	1589	324	177	942	217	205			
Future Volume (vph)	1589	324	177	942	217	205			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Storage Length (m)		50.0	65.0		70.0	70.0			
Storage Lanes		1	1		1	0			
Taper Length (m)			80.0		20.0				
Lane Util, Factor	0.95	1.00	1.00	0.95	1.00	1.00			
Ped Bike Factor		0.96			0.98				
Frt		0.850				0.850			
Flt Protected			0.950		0.950				
Satd. Flow (prot)	3357	1502	1679	3357	1679	1502			
Flt Permitted			0.060		0.950				
Satd, Flow (perm)	3357	1449	106	3357	1645	1502			
Right Turn on Red		Yes				Yes			
Satd. Flow (RTOR)		167				11			
Link Speed (k/h)	60			60	50				
Link Distance (m)	236.7			238.7	204.5				
Travel Time (s)	14.2			14.3	14.7				
Confl. Peds. (#/hr)		6	6		5	5			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Adi, Flow (vph)	1589	324	177	942	217	205			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1589	324	177	942	217	205			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Left	LNA	R NA			
Median Width(m)	5.0			5.0	3.7				
Link Offset(m)	0.0			0.0	0.0				
Crosswalk Width(m)	9.0			9.0	9.0				
Two way Left Turn Lane									
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06			
Turning Speed (k/h)		14	24		24	14			
Number of Detectors	2	1	1	2	1	1			
Detector Template	Thru	Right	Left	Thru	Left	Riaht			
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6			
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)	5.5	18.6	18.6	5.5	18.6	18.6			
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+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)	87.5			87.5					
Detector 2 Size(m)	5.5			5.5					
Detector 2 Type	CI+Ex			CI+Ex					
Detector 2 Channel									
Detector 2 Extend (s)	0.0			0.0					
Turn Type	NA	Perm	pm+pt	NA	Prot	pt+ov			
Protected Phases	2		1	6	4	18	3	8	
Permitted Phases		2	6						
Detector Phase	2	2	1	6	4	18			
Switch Phase	_	_							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0		3.0	10.0	
(0)	10.0		0.0		0.0		5.0		

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø8	
Minimum Split (s)	31.2	31.2	11.2	31.2	11.3		30.0	16.3	
Total Split (s)	68.0	68.0	16.0	84.0	16.0		30.0	46.0	
Total Split (%)	52.3%	52.3%	12.3%	64.6%	12.3%		23%	35%	
Maximum Green (s)	61.8	61.8	9.8	77.8	9.7		28.0	39.7	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3		2.0	3.3	
All-Red Time (s)	2.5	2.5	2.5	2.5	3.0		0.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.3				
Lead/Lag	l aq	l aq	Lead	0.2	Lag		l ead		
Lead-Lag Optimize?	Lug	Lag	Loud		Lag		Loud		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	None	C-Max	None		None	None	
Walk Time (s)	7.0	7.0	1 tonio	7.0			7.0	Nono	
Flash Dont Walk (s)	18.0	18.0		18.0			21.0		
Pedestrian Calls (#/hr)	10	10.0		10			10		
Act Effet Green (s)	62.2	62.2	80.8	80.8	24 7	55.4	10		
Actuated g/C Ratio	0 48	0 48	0.62	0.62	0 19	0.43			
v/c Ratio	0.40	0.40	0.02	0.02	0.13	0.40			
Control Delay	36.4	73	67.2	11 9	61.00	25.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	36.4	73	67.2	11.9	61.9	25.1			
	۲.00	Δ	UT.Z	R	01.5 F	20.1			
Approach Delay	31 /	Л	L	20.6	44.0	U			
Approach LOS	01. 1			20.0	ידי.0 ח				
Queue Length 50th (m)	106.4	12.2	28.0	/3.2	15.6	30.6			
Queue Length 95th (m)	#239.6	m16.7	±11 4	55.9	#121 7	46.9			
Internal Link Dist (m)	π200.0 010 7	1110.7	<i>πι</i> 1. 1	21/ 7	180.5	- 0.5			
Turn Bay Length (m)	212.1	50.0	65.0	217.1	70.0	70.0			
Base Capacity (yph)	1606	780	216	2087	318	6/3			
Starvation Can Reducto	1000	100	210	2007	0	043			
Spillback Cap Reducto	0	0	0	0	0	0			
Storage Can Reductin	0	0	0	0	0	0			
Boducod v/o Patio	0 00	0 42	0 82	0.45	0 68	030			
	0.99	0.42	0.02	0.45	0.00	0.52			
Intersection Summary	Other								
Area Type:	Other								
Cycle Length: 130									
Actuated Cycle Length: 130	Lto where Oil								
Unset: 129 (99%), Referenced	to phase Z	EBI and b	IVBIL, St	art of Gree	en				
Natural Cycle: 145	a start								
Control Type: Actuated-Coord	nated								
Maximum V/c Ratio: 0.99				1.		1.00.0			
Intersection Signal Delay: 29.5)			Ir	itersection				
Intersection Capacity Utilizatio	n 85.0%			10	JU Level of	f Service E			
Analysis Period (min) 15									
# 95th percentile volume exc	eeds capaci	ty, queue r	nay be lon	iger.					
Queue shown is maximum	atter two cyc	les.							
m Volume for 95th percentile	e queue is m	etered by u	ipstream s	ignal.					
Splits and Phases: 3: Lama	rche & Innes								
2 2							1.1	1.	M 22



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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø8	
Lane Configurations	**	1	× 1	**	× 1	1			
Traffic Volume (vph)	1449	324	177	942	217	205			
Future Volume (vph)	1449	324	177	942	217	205			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Storage Length (m)		50.0	65.0		70.0	70.0			
Storage Lanes		1	1		1	0			
Taper Length (m)		•	80.0		20.0	Ŭ			
Lane Litil Factor	0.95	1 00	1 00	0.95	1 00	1 00			
Ped Bike Factor	0.00	0.96	1.00	0.00	0.98	1.00			
Frt		0.850			0.00	0 850			
Flt Protected			0.950		0.950				
Satd Flow (prot)	3357	1502	1679	3357	1679	1502			
Flt Permitted	0001	1002	0.060	0001	0.950	1002			
Satd Flow (perm)	3357	1449	106	3357	1645	1502			
Right Turn on Red	0001	Yes	100	0001	1010	Yes			
Satd Flow (RTOR)		183				16			
Link Speed (k/h)	60	100		60	50	10			
Link Distance (m)	236.7			238.7	204 5				
Travel Time (s)	1/1 2			1/1 3	204.0				
Confl Peds (#/br)	17.2	6	6	14.0	5	5			
Peak Hour Factor	1 00	1 00	1.00	1 00	1 00	1 00			
Adi Flow (vpb)	1//0	32/	1.00	9/2	217	205			
Shared Lane Traffic (%)	1773	524	111	742	211	200			
Lane Group Flow (vph)	1//0	324	177	0/12	217	205			
Enter Blocked Intersection	No	J24 No	No	No	No	No			
Lane Alignment	Loft	Right	Left	Loff					
Median Width(m)	5.0	Ttigrit	Leit	5.0	37				
Link Offset(m)	0.0			0.0	0.0				
Crosswalk Width(m)	0.0			0.0	0.0				
	5.0			5.0	5.0				
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06			
Turning Speed (k/h)	1.00	1.00	24	1.00	24	1.00			
Number of Detectors	2	1	2 4 1	2	2 4 1	14			
Detector Template	Z	Pight	Loft	Z	Loft	Pight			
Leading Detector (m)	03.0	18.6	18.6	03.0	18.6	18.6			
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)	5.5	18.6	18.6	5.5	18.6	18.6			
Detector 1 Type									
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)	97.5	0.0	0.0	0.0 87.5	0.0	0.0			
Detector 2 Position(m)	67.5			67.5					
Detector 2 Size(III)									
Detector 2 Channel									
Detector 2 Channel	0.0			0.0					
	0.0	Derm		0.0	Deat				
Turn Type	NA 2	Perm	pm+pt	NA	Prot	pt+ov	2	0	
Protected Phases	2	0		0	4	Ιð	3	õ	
Permitted Phases	0	2	0	6	4	10			
Delector Phase	2	2	T	6	4	δ			
	10.0	10.0	F 0	10.0	F 0		2.0	10.0	
iviinimum initiai (s)	10.0	10.0	5.0	10.0	5.0		3.0	10.0	

Lane Group EBT EBR WBL WBT NBL NBR Ø3 Ø8 Minimum Spitt (s) 31.2 11.2 31.2 11.3 30.0 16.3 Total Spitt (s) 66.0 66.0 16.0 40.0 16.0 30.0 46.0 Total Spitt (s) 62.3 52.3% 12.3% 64.6% 12.3% 238 35% Maximum Green (s) 61.8 61.8 9.8 77.8 9.7 28.0 33.3 Vellow Time (s) 3.7 3.7 3.7 3.3 2.0 3.0 Lead Hag Lag Lag Lag Lag Lag Lag Lead Hag Lag Lag Lag Lag Lag Lag Lead Hag C/Max None None None None None Wait Time (s) 7.0 7.0 7.0 7.0 7.0 7.0 Pacistria Call Reft Time (s) 6.2 2.2 8.08 8.24 <t< th=""><th></th><th>-</th><th>\rightarrow</th><th>-</th><th>-</th><th>1</th><th>1</th><th></th><th></th><th></th></t<>		-	\rightarrow	-	-	1	1			
Minimum Split (s) 31.2 31.2 11.3 30.0 16.3 Total Split (s) 66.0 68.0 16.0 94.0 16.0 30.0 46.0 Total Split (s) 62.3% 52.3% 12.3% 64.6% 12.3% 23% 35% Maximum Green (s) 61.8 81.8 9.77.8 9.7 280.0 33.7 Color Time (s) 2.5 2.5 2.5 3.0 0.0 3.3 Lead-Lag Ubin (s) 0.2 5.2 2.5 2.6 3.1 3.7 Lead-Lag Ubin (s) 0.0 0.0 0.0 0.0 3.3 3.0 Lead-Lag Optimize? Vehice Extension (s) 3.0 3.0 3.0 3.0 3.0 3.0 Vehice Extension (s) 6.2 6.2 8.0.8 8.0.8 2.4.7 56.4 Lead-Lag Optimize? Veike Kitho 10 10 10 10 Actasted gi CRato 0.48 0.62 0.6.19 0.22 0.6.2 <t< th=""><th>Lane Group</th><th>EBT</th><th>EBR</th><th>WBL</th><th>WBT</th><th>NBL</th><th>NBR</th><th>Ø3</th><th>Ø8</th><th></th></t<>	Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø8	
Total Spit (%) 680 680 160 840 160 300 460 Total Spit (%) 52.3% 52.3% 12.3% 64.6% 12.3% 23% 35% Valiow Time (s) 3.7 3.7 3.7 3.3 2.0 3.3 Valiow Time (s) 3.7 3.7 3.7 3.3 2.0 3.3 Lead Time (s) 2.5 2.5 2.5 3.0 0.0 3.0 Lead Time (s) 0.2 6.2 6.2 6.3 Lead Lead Lead Algo Dimine? Valio Extension (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Vehicle Extension (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Vehicle Extension (s) 18.0 18.0 18.0 21.0 Protein Call Call Time (s) 6.2 6.2 8.0.8 24.7 55.4 Actueted (call Call Call Call Call Call Call Call	Minimum Split (s)	31.2	31.2	11.2	31.2	11.3		30.0	16.3	
Total Split (%) 52.3% 52.3% 12.3% 64.6% 12.3% 23% 35% Maximum Green (s) 61.8 61.8 9.8 77.8 9.7 28.0 39.7 Internation Green (s) 3.7 3.7 3.7 3.3 2.0 3.3 All-Red Time (s) 2.5 2.5 2.5 2.6 3.0 0.0 3.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 Lead-Lag Lead Lea	Total Split (s)	68.0	68.0	16.0	84.0	16.0		30.0	46.0	
Maximum Green (s) 61.8 61.8 77.8 9.7 28.0 39.7 Vellow Time (s) 3.7 3.7 3.7 3.3 2.0 3.3 All-Red Time (s) 2.5 2.5 2.5 3.0 0.0 3.0 Lead Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 3.0 Lead Lag Lead Lead Lead Lead Lead Lead Vehicle Extension (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Recall Mode C-Max C-Max None None None None Vehicle Green (s) 6.2 6.2 8.8 8.8 24.7 55.4 Actaleed (JC Reen (s) 6.2 6.2 8.8 8.8 24.7 55.4 Actaleed (JC Reen (s) 6.4 0.48 0.62 0.62 0.19 0.43 vice Ratio 0.90 0.0 0.00 0.0 0.0 0.0 0.0	Total Split (%)	52.3%	52.3%	12.3%	64.6%	12.3%		23%	35%	
Yellow Time (s) 3.7 3.7 3.7 3.3 2.0 3.3 All-Red Time (s) 2.5 2.5 2.5 3.0 0.0 3.0 Lead Lag Uag (Lag) 0.0 0.0 0.0 0.0 3.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 Lead Lag Lag <t< td=""><td>Maximum Green (s)</td><td>61.8</td><td>61.8</td><td>9.8</td><td>77.8</td><td>9.7</td><td></td><td>28.0</td><td>39.7</td><td></td></t<>	Maximum Green (s)	61.8	61.8	9.8	77.8	9.7		28.0	39.7	
Ail-Red Time (s) 25 25 25 25 30 0.0 3.0 Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 Lost Time (s) 6.2 6.2 6.2 6.3 Lead Lead Lead-Lag Optimize?	Yellow Time (s)	3.7	3.7	3.7	3.7	3.3		2.0	3.3	
Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 Lead/Lag Lag Lag Lag Lag Lead/Lag Lag Lag Lag Lag Lead/Lag Lead Lead Lead Lead/Lag Lead Lead Lead Vehicle Extension (s) 3.0 3.0 3.0 3.0 Recall Mode C-Max None None None Vehicle Extension (wak (s) 18.0 18.0 21.0 10 Padestran Calls (#hr) 10 10 10 42.4 ActLeted g/C Ratio 0.48 0.42 0.68 0.32 Control Delay 2.54 6.6 67.2 11.9 61.9 24.4 Cola C A E B E C Approach Delay 2.19 2.06 43.7 Approach Delay 2.19 2.45.6 29.8 <td>All-Red Time (s)</td> <td>2.5</td> <td>2.5</td> <td>2.5</td> <td>2.5</td> <td>3.0</td> <td></td> <td>0.0</td> <td>3.0</td> <td></td>	All-Red Time (s)	2.5	2.5	2.5	2.5	3.0		0.0	3.0	
Total Lost Time (s) 0.2 6.2 6.2 6.3 LeadLag Lag Lag Lag Lead LeadLag (ptimize? Valide Extension (s) 3.0 3.0 3.0 3.0 3.0 3.0 Wehide Extension (s) 3.0 7.0 7.0 7.0 TO TO Flash Dont Walk Time (s) 7.0 7.0 7.0 TO TO TO Pedestrian Calls (#hr) 10 10 10 10 Actilit Green (s) 62.2 62.2 80.8 80.8 24.7 75.4 Actuated g/C Ratio 0.48 0.48 0.62 0.19 0.43 Valued Call Call Call Call Call Call Call Cal	Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0				
Lead Lag Lag Lag Lag Lag Lead Lead-Lag Optimize?	Total Lost Time (s)	6.2	6.2	6.2	6.2	6.3				
Lead-Lag Optimize? Ling Ling <thling< th=""> Ling Ling<td>Lead/Lag</td><td>Lao</td><td>Lag</td><td>Lead</td><td>•</td><td>Lag</td><td></td><td>Lead</td><td></td><td></td></thling<>	Lead/Lag	Lao	Lag	Lead	•	Lag		Lead		
Vehicle Extension (s) 3.0	Lead-Lag Optimize?		9	200.0		_~9				
Recall Mode C-Max C-Max None None None Walk Time (s) 7.0 7.0 7.0 7.0 7.0 Pedestrian Calle (#/hr) 10 10 10 10 At Effed Green (s) 62.2 62.2 80.8 80.8 24.7 55.4 At Catuated g/C Ratio 0.43 0.43 0.43 0.43 0.44 0.62 0.62 0.90 0.41 0.82 0.66 0.02 0.00	Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Walk Time (s) 7.0 7.0 7.0 7.0 7.0 Flash Dont Walk (s) 18.0 18.0 18.0 21.0 Pedestrian Calls (#hr) 10 10 10 Act Effed Green (s) 62.2 62.2 80.8 80.8 24.7 55.4 Actuated g/C Ratio 0.48 0.48 0.62 0.19 0.43 v/v Ratio 0.00	Recall Mode	C-Max	C-Max	None	C-Max	None		None	None	
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Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 3: Lamarche & Innes	Intersection Canacity Litilizatio	, n 80 9%			10		f Service D			
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 3: Lamarche & Innes	Analysis Period (min) 15	11 00.3 /0			N					
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APPENDIX K

Transportation Demand Management

TDM-Supportive Development Design and Infrastructure Checklist:

Non-Residential Developments (office, institutional, retail or industrial)

	Legend
REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

	TDM-s	supportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	1.	WALKING & CYCLING: ROUTES	
	1.1	Building location & access points	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	
	1.2	Facilities for walking & cycling	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations (see Official Plan policy 4.3.3)	□ - N/A
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible (see Official <i>Plan policy 4.3.12</i>)	

	TDM-s	upportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks (see Official Plan policy 4.3.10)	
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps (see Official Plan policy 4.3.10)	
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on- road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians (see Official Plan policy 4.3.11)	
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	
	1.3	Amenities for walking & cycling	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	

	TDM-s	upportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	2.	WALKING & CYCLING: END-OF-TRIP FACILI	TIES
	2.1	Bicycle parking	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible <i>(see Official Plan policy 4.3.6)</i>	
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well- used areas (<i>see Zoning By-law Section 111</i>)	
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored <i>(see Zoning By-law Section 111)</i>	
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	
	2.2	Secure bicycle parking	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers <i>(see Zoning By-law Section 111)</i>	□ - N/A
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	
	2.3	Shower & change facilities	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	
	2.4	Bicycle repair station	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	

	TDM-s	supportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	3.	TRANSIT	
	3.1	Customer amenities	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	
	4.	RIDESHARING	
	4.1	Pick-up & drop-off facilities	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	
	4.2	Carpool parking	·
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	
	5.	CARSHARING & BIKESHARING	
	5.1	Carshare parking spaces	
BETTER	5.1.1	Provide carshare parking spaces in permitted non- residential zones, occupying either required or provided parking spaces (see Zoning By-law Section 94)	
	5.2	Bikeshare station location	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	

	TDM-s	supportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	6.	PARKING	
	6.1	Number of parking spaces	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly <i>(see Zoning By-law</i> <i>Section 104)</i>	
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking <i>(see Zoning By-law Section 111)</i>	
	6.2	Separate long-term & short-term parking areas	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	
	7.	OTHER	
	7.1	On-site amenities to minimize off-site trips	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	

APPENDIX L

MMLOS Analysis

Segment MMLOS Analysis

This section provides a review of the boundary street Innes Road, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines* were used to evaluate the levels of service for each alternative mode of transportation on Innes Road between Pagé Road and Lamarche Avenue. The targets associated with the Arterial Mainstreet designation have been considered.

Exhibit 4 of the *MMLOS Guidelines* has been used to evaluate the segment pedestrian level of service (PLOS) of Innes Road. Exhibit 22 of the *MMLOS Guidelines* identifies a target PLOS C for all Arterial Roadways. The results of the segment PLOS analysis are summarized in **Table 1**.

Exhibit 11 of the *MMLOS Guidelines* has been used to evaluate the segment bicycle level of service (BLOS) of Innes Road. For Arterial Mainstreets, Exhibit 22 of the *MMLOS Guidelines* identifies a target BLOS B for roadways with a Crosstown Bikeway designation. The results of the segment BLOS analysis are summarized in **Table 2**.

Exhibit 15 of the *MMLOS Guidelines* has been used to evaluate the segment transit level of service (TLOS) of Innes Road. For Arterial Mainstreets, Exhibit 22 of the *MMLOS Guidelines* identifies a target TLOS D for roadways with a Transit Priority with Isolated Measures designation. The results of the segment TLOS analysis are summarized in **Table 3**.

Exhibit 20 of the *MMLOS Guidelines* has been used to evaluate the segment truck level of service (TkLOS) of Innes Road. For Arterial Mainstreets, Exhibit 22 of the *MMLOS Guidelines* identifies a target TkLOS D for roadways with a truck route designation. The results of the segment TkLOS analysis are summarized in **Table 4**.

Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On- Street Parking	Operating Speed ⁽¹⁾	PLOS
5m to 2.0m	> 3,000 vpd	No	70 km/h	E
5m to 2.0m	> 3,000 vpd	No	70 km/h	E
5	im to 2.0m	5m to 2.0m > 3,000 vpd 5m to 2.0m > 3,000 vpd	Sim to 2.0m > 3,000 vpd No Sim to 2.0m > 3,000 vpd No	Sim to 2.0m > 3,000 vpd No 70 km/h Sim to 2.0m > 3,000 vpd No 70 km/h

Table 1: PLOS Segment Analysis – Innes Road

1. Operating speed taken as posted speed plus 10 km/h

Table 2: BLOS Segment Analysis – Innes Road

Road Class	Route Type	Bikeway Type	Travel Lanes	Operating Speed	Bike Lane Width	Bike Lane Blockage	BLOS
Arterial	Crosstown Bikeway	Curbside Bike Lane	4	70 km/h	<u>></u> 1.8m	Rare	E

Table 3: TLOS Segment Analysis – Innes Road

Eccility Type	Exposure to Cong				
гасшту гуре	Congestion	Friction	Incident Potential	1105	
Mixed Traffic – Limited	Yes	Low	Medium	П	
Parking/Driveway Friction	165	LOW	Mealann	נ	

Table 4: TkLOS Segment Analysis – Innes Road

Curb Lane Width	Number of Travel Lanes Per Direction	TkLOS
<u><</u> 3.5m	2	A

Intersection MMLOS Analysis

The following is a review of the MMLOS of the signalized intersections within the study area, using complete streets principles. All of these intersections have been evaluated based on existing conditions. Innes Road/Orléans Boulevard has been evaluated using the targets for the General Urban Area, and Innes Road/Pagé Road and Innes Road/473m East of Pagé Road have been evaluated using the targets for Arterial Mainstreets.

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 suggest a target PLOS C for Arterial Mainstreets (Innes Road east of Pagé Road) or all roadways within the General Urban Area (Innes Road west of Pagé Road, Orléans Boulevard, Pagé Road, Boyer Road). The results of the intersection PLOS analysis are summarized in **Table 5** through **Table 7**.

Exhibit 12 of the *MMLOS Guidelines* has been used to evaluate the existing BLOS at the intersections listed above. Exhibit 22 of the *MMLOS Guidelines* suggest a target BLOS B for Crosstown Bikeways on Arterial Mainstreets or in the General Urban Area (Innes Road), a target BLOS B for Local Routes in the General Urban Area (Orléans Boulevard, Boyer Road), and a target BLOS C for Spine Routes in the General Urban Area (Pagé Road). The results of the intersection BLOS analysis are summarized in **Table 8**.

Exhibit 16 of the *MMLOS Guidelines* has been used to evaluate the existing TLOS at the intersections listed above. Exhibit 22 of the *MMLOS Guidelines* suggest a target TLOS D for Transit Priority Corridors with Isolated Measures (Innes Road). Orléans Boulevard has also been evaluated for TLOS, as transit service is provided on this roadway. The results of the intersection TLOS analysis are summarized in **Table 9**.

Exhibit 21 of the *MMLOS Guidelines* has been used to evaluate the existing TkLOS at the intersections listed above. Exhibit 22 of the *MMLOS Guidelines* suggest a target TkLOS D for arterial roadways with a truck route designation (Innes Road, Orléans Boulevard north of Innes Road), and a target TkLOS E for arterial roadways without a truck route designation (Orléans Boulevard south of Innes Road). The results of the intersection TkLOS analysis are summarized in **Table 10**.

CRITERIA	A North Approach		South Approach		East Approach		West Approach	
			PETSI SCORE					
CROSSING DISTANCE CONDITIONS								
Median > 2.4m in Width	No		No	10	No	10	No	-10
Lanes Crossed (3.5m Lane Width)	10 +	-10	10 +	-10	10 +	-10	10 +	-10
SIGNAL PHASING AND TIMING								
Left Turn Conflict	Protected	0	Protected	0	Permissive	-8	Perm + Prot	-8
Right Turn Conflict	Permissive or Yield	-5						
Right Turn on Red	N/A	0	N/A	0	N/A	0	N/A	0
Leading Pedestrian Interval No		-2	No	-2	No	-2	No	-2
CORNER RADIUS				•		•	-	•
Parallel Radius	> 15m to 25m	-8						
Parallel Right Turn Channel	Conventional without Receiving	0						
Perpendicular Radius	> 15m to 25m	-8						
Perpendicular Right Turn Channel	Conventional without Receiving	0						
CROSSING TREATMENT								
Treatment	Standard	-7	Standard	-7	Zebra Stripe	-4	Zebra Stripe	-4
	PETSI SCORE	-40		-40		-45		-45
	LOS	F		F		F		F
			DELAY SCORE					
Cycle Length		130		130		130		130
Pedestrian Walk Time		45.8		45.8		26.3		7.3
	DELAY SCORE	27.3		27.3		41.4		57.9
	LOS	С		С		E		E
	OVERALL	F		F		F		F

Table 5: PLOS Intersection Analysis – Innes Road/Orléans Boulevard

Table 6: PLOS Intersection Analysis – Innes Road/Pagé Road

CRITERIA	North Approach	North Approach South Approach East Approach			West Approach			
			PETSI SCORE					
CROSSING DISTANCE CONDITIONS								
Median > 2.4m in Width	No		No	55	No	22	No	20
Lanes Crossed (3.5m Lane Width)	6	55	6	55	8	23	7	39
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	eading Pedestrian Interval No		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
	PETSI SCORE	20		20		-12		4
	LOS	F		F		F		F
			DELAY SCORE					
Cycle Length		110		110		120		120
Pedestrian Walk Time		47.8		47.8		7.2		7.2
	DELAY SCORE	17.6		17.6		53.0		53.0
	LOS	в		В		E		E
	OVERALL	F		F		F		F

CRITERIA	ERIA North Approach		South Approach		East Approach		West Approach	
			PETSI SCORE					
CROSSING DISTANCE CONDITIONS								
Median > 2.4m in Width	No	No		55	No	20	No	20
Lanes Crossed (3.5m Lane Width)	4	00	6	55	7	39	7	1 39
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	ading Pedestrian Interval No		No	-2	No	-2	No	-2
CORNER RADIUS								
Parallel Radius	> 5m to 10m	-5	> 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
	PETSI SCORE	54		20		4		4
	LOS	D		F		F		F
			DELAY SCORE					
Cycle Length		110		110		120		120
Pedestrian Walk Time		56.9		56.9		7.7		7.7
	DELAY SCORE	12.8		12.8		52.5		52.5
	LOS	в		В		E		E
	OVERALL	D		F		F		F

		119515		
Approach	Facility Type	Criteria	Travel Lanes and/or Speed	BLOS
Innes Road/Orlé	ans Boulevard			
North Approach	Mixed Traffic	Right Turn Lane Characteristics	Right turn lane > 50m	F
		Left Turn Accommodation	ria Travel Lanes and/or Speed BI n Lane ristics Right turn lane > 50m Image: State	F
Approach Innes Road/Orle North Approach South Approach East Approach West Approach North Approach South Approach East Approach West Approach West Approach North Approach South Approach	Mixed Traffic	Right Turn Lane Characteristics	Right turn lane > 50m	F
		Left Turn Accommodation	Two lanes crossed, \geq 50 km/h	F
East Approach	Pocket	Right Turn Lane Characteristics	Right turn lane > 50m, turning speed <u><</u> 30 km/h	D
	Bike Lane	Left Turn Accommodation	Two lanes crossed, \geq 50 km/h	F
West Approach	Mixed Traffic	Right Turn Lane Characteristics	Right turn lane > 50m	F
		Left Turn Accommodation	Dual left turn lanes	F
Innes Road/Pag	e Road			
North Approach	Mixed Traffia	Right Turn Lane Characteristics	Shared through/right turn lane	А
попш Арргоасн		Left Turn Accommodation	No lanes crossed, < 50 km/h	В
South Approach	Mixed Traffic	Right Turn Lane Characteristics	Shared through/right turn lane	А
		Left Turn Accommodation	No lanes crossed, \leq 50 km/h	В
East Approach	Curbside	Right Turn Lane Characteristics	Shared through/right turn lane	А
	Bike Lane	Left Turn Accommodation	Two lanes crossed, \geq 50 km/h	F
West Approach	Curbside	Right Turn Lane Characteristics	Shared through/right turn lane	А
	Bike Lane	Left Turn Accommodation	Two lanes crossed, \geq 50 km/h	F
Innes Road/473	m East of Pagé	Road		
North Approach	Mixed Traffic	Right Turn Lane Characteristics	Shared through/right turn lane	А
		Left Turn Accommodation	No lanes crossed, \leq 50 km/h	В
South Approach	Mixed Traffic	Right Turn Lane Characteristics	Shared through/right turn lane	Α
	Mixed Hallie	Left Turn Accommodation	No lanes crossed, \geq 60 km/h	D
East Approach	Curbside	Right Turn Lane Characteristics	Shared through/right turn lane	A
	Bike Lane	Left Turn Accommodation	Two lanes crossed, \geq 50 km/h	F
West Approach	Curbside	Right Turn Lane Characteristics	Shared through/right turn lane	А
τι σοι Αρρισαστι	Bike Lane	Left Turn Accommodation	Two lanes crossed, \geq 50 km/h	F

Table 8: BLOS Intersection Analysis

Table 9: TLOS Intersection Analysis

Approach	Del	ay ⁽¹⁾	
Approach	AM Peak	PM Peak	TL05
Innes Road/Orléans Boule	vard		
North Approach	114 sec	35 sec	F
South Approach	31 sec	22 sec	E
East Approach	37 sec	42 sec	F
West Approach	43 sec	53 sec	F
Innes Road/Pagé Road			
East Approach	7 sec	17 sec	С
West Approach	6 sec	5 sec	В
Innes Road/473m East of F	Pagé Road		
East Approach	6 sec	4 sec	В
West Approach	2 sec	3 sec	В
Last Approach West Approach	6 sec 2 sec	4 sec 3 sec	B

1. Delay based on outputs from Synchro analysis of existing conditions

Table 10: TkLOS Intersection Analysis

Approach	Effective Corner Radius	Number of Receiving Lanes Departing Intersection	TkLOS
Innes Road/Orléans E	Boulevard		
North Approach	> 15m	3	А
South Approach	> 15m	2	А
East Approach	> 15m	2	А
West Approach	> 15m	2	А
Innes Road/Pagé Roa	ad		
East Approach	10m to 15m	1	E
West Approach	10m to 15m	1	E
Innes Road/473m Eas	st of Pagé Road		
East Approach	< 10m	1	F
West Approach	> 15m	1	C

APPENDIX M

MTO Left Turn Lane Storage Graph



Exhibit 9A-32

APPENDIX N

Functional Design of Median Break



				SCALE		DESIGN	FOR REV	EW ONLY
						RCH		
				1.500		CHECKED		
				1.500		JRA		
				DF				
						CHECKED		
2	WORK IN PROGRESS	JAN 16/24	RCH	1:500 0 5 10	15 20	JRA		
1.	ISSUED FOR CITY REVIEW	NOV 30/23	JLL			APPROVED		
No	. REVIS	ON DATE	BY			JLL		



SHT11X17.DWG - 279mmX432mm



SHT11X17.DWG - 279mmX432mm

APPENDIX O

Total Synchro Analysis

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Lane Group	FBI	FBT	FBR	WBI	WBT	WBR	NBI	NBT	NBR	SBI	SBT	SBR
Lane Configurations	**	**	1	*	**	1	*	**	1	*	**	1
Traffic Volume (vph)	125	461	24	28	1492	198	209	267	55	82	103	473
Future Volume (vph)	125	461	24	28	1492	198	209	267	55	82	103	473
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0			40.0			10.0		I.	20.0		
Lane Litil Factor	-0.0 0 07	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00
Ped Bike Factor	1.00	0.55	0.96	0.00	0.00	0.97	0.00	0.55	0.04	0.97	0.55	0.08
Frt	1.00		0.50	0.55		0.57	0.55		0.54	0.57		0.50
Fit Protected	0 950		0.000	0.950		0.000	0.950		0.000	0.950		0.000
Satd Flow (prot)	2005	31//	1/73	1572	3357	1502	1712	3357	1502	1670	3357	1532
Elt Dormittod	0.050	5144	1475	0.050	5557	1302	0.5/8	5557	1002	0.587	5551	1002
Sata Elow (porm)	2088	21//	1/16	1540	3357	1/63	0.040	3357	1/12	1003	3357	1500
Dight Turn on Pod	2900	5144	1410 Voc	1049	5557	1403 Voc	901	5557	1413 Voc	1005	5557	Voc
Sate Flow (PTOP)			1/2			1/3			82			129
Link Speed (k/b)		60	145		60	145		50	02		50	150
Link Distance (m)		00			401.4			2077			201.0	
		204.0			491.4			307.7 27.0			301.9	
Confl Dodo (#/br)	6	15.9	11	11	29.5	6	6	27.9	20	20	Z1.7	6
Confl. Peds. (#/hr)	0		14	14		0	0		32	32		0
Confi. Bikes (#/nr)	1 00	1 00	1 00	1 00	1 00	1 00	1.00	1 00	1 00	1 00	1 00	1 00
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%	10%	5%	10%	3%	3%	1%	3%	5%	3%	3%	170
Adj. Flow (vpn)	125	461	24	28	1492	198	209	267	55	82	103	4/3
Shared Lane Traffic (%)	405	404	04	00	4400	400	000	007		00	400	470
Lane Group Flow (vpn)	125	461	24	28	1492	198	209	267	55	82	103	4/3
Enter Blocked Intersection	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO D NA
	LNA	Len	RNA	L NA	Lett	RNA	L NA	Len	RNA	L NA	Len	RNA
Viedian VVidtn(m)		9.0			7.4			6.0			6.0	
		0.0			0.0			0.0			0.0	
		5.0			5.0			5.0			5.0	
Two way Leπ Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	1.00	4.00	4.00	4.00	4.00	4.00
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	0	14	24	0	14	24	0	14	24	0	14
Number of Detectors	1			1	Z		1	Z		1	Z	1
Detector Template	Left	Inru	Right	Left	Inru	Right	Lett	Inru	Right	Left	Inru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	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 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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel		~ ~			~ ~			~ ~			~ ~	
Detector 2 Extend (s)		0.0	-	-	0.0	-		0.0	-	-	0.0	2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	_	1	6	-	3	8	_		4	
Permitted Phases	_	-	2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	50	10.0	10.0	50	10.0	10.0	50	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11 7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	13.0	72.0	72.0	13.0	72.0	72.0	12.0	45.0	45.0	33.0	33.0	33.0
Total Split (%)	10.0%	55.4%	55.4%	10.0%	55.4%	55.4%	9.2%	34.6%	34.6%	25.4%	25.4%	25.4%
Maximum Green (s)	6.4	65.8	65.8	6.8	65.8	65.8	53	38.3	38.3	26.3	26.3	26.3
Yellow Time (s)	37	37	37	37	37	37	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?		Ŭ	Ŭ		Ŭ	Ŭ				Ŭ	Ŭ	Ŭ
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		14	14		6	6		32	32	6	6	6
Act Effct Green (s)	6.4	71.0	71.0	6.5	65.8	65.8	38.3	38.3	38.3	26.3	26.3	26.3
Actuated g/C Ratio	0.05	0.55	0.55	0.05	0.51	0.51	0.29	0.29	0.29	0.20	0.20	0.20
v/c Ratio	0.85	0.27	0.03	0.36	0.88	0.24	0.66	0.27	0.12	0.41	0.15	1.15
Control Delay	103.8	17.1	0.1	72.6	35.9	6.2	49.8	36.0	3.3	52.1	43.4	123.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.8	17.1	0.1	72.6	35.9	6.2	49.8	36.0	3.3	52.1	43.4	123.2
LOS	F	В	А	E	D	А	D	D	А	D	D	F
Approach Delay		34.2			33.0			38.1			101.9	
Approach LOS		С			С			D			F	
Queue Length 50th (m)	15.3	32.2	0.0	6.5	159.9	6.5	39.7	25.4	0.0	17.0	10.6	~103.1
Queue Length 95th (m)	#31.9	42.5	0.0	16.0	191.7	18.4	60.8	36.1	4.2	31.9	18.1	#163.9
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	147	1717	838	82	1699	811	318	989	474	202	679	413
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.27	0.03	0.34	0.88	0.24	0.66	0.27	0.12	0.41	0.15	1.15
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to p	hase 2:EBT	and 6:WE	BT, Start of	Green								
Natural Cycle: 115												
Control Type: Actuated-Coordin	nated											
Maximum v/c Ratio: 1.15												
Intersection Signal Delay: 46.9	9 Intersection LOS: D											
Intersection Capacity Utilization		ICU Level of Service G										
Analysis Period (min) 15												
 Volume exceeds capacity, queue is theoretically infinite. 												
Queue shown is maximum after two cycles.												
 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. 												
Splite and Phases 1. Orlean	e & Innee											
opins and Fhases. 1. Offean	is a mines											

 Ø1
 Ø2 (R)

 13s
 72 s

 Ø5
 Ø6 (R)

 13s
 72 s

 Ø5
 Ø6 (R)

 13s
 72 s
2: Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	5	≜1 ⊾			×.	41			\$			4
Traffic Volume (vph)	12	530	21	3	37	1526	20	14	12	38	34	9
Future Volume (vph)	12	530	21	3	37	1526	20	14	12	38	34	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0		45.0		0.0	0.0		0.0	0.0	
Storage Lanes	1		0		1		0	0		0	0	
Taper Length (m)	35.0				55.0		•	2.5		· ·	2.5	
Lane Util, Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1 00	0.00	0.00	0.99	1.00	0.00		0.99			0.99
Frt		0.994			0.00	0.998			0.920			0.932
Elt Protected	0.950				0.950	0.000			0.989			0.981
Satd Flow (prot)	1586	3126	0	0	1515	3349	0	0	1568	0	0	1596
Elt Permitted	0 129	0120	Ŭ	Ŭ	0 446	0010	Ŭ	Ŭ	0.922	v	Ŭ	0.851
Satd Flow (perm)	215	3126	0	0	707	3349	0	0	1458	0	0	1384
Right Turn on Red	210	0120	Yes	U	101	0010	Yes	U	1100	Yes	Ū	1001
Satd Flow (RTOR)		6	100			2	100		38	100		41
Link Speed (k/h)		60				60			40			40
Link Distance (m)		491.4				142 1			212.5			273.4
Travel Time (s)		29.5				85			10.1			2/ 6
Confl Peds (#/br)	1	20.0	7		7	0.0	Λ	11	15.1			24.0
Confl Bikes (#/hr)	т		1		1		т	11		1		
Pook Hour Easter	1.00	1 00	1 00	1.00	1 00	1.00	1.00	1.00	1.00	1 00	1 00	1.00
	Ω%	1.00	5%	30/	1.00	30/	5%	1.00	1.00	30/	1.00	1.00
Adi Elow (vob)	970 10	530	J /0 01	3/0	1570	1526	2/0	1/0	10/0	30	3/	10 /0
Shared Lane Traffic (%)	12	550	21	J	51	1520	20	14	12	50	54	9
	10	551	٥	٥	40	15/6	٥	٥	64	٥	٥	96
Enter Blocked Interportion	1Z No	No	No	No	40	1040 Voo	No	No	04 No	No	No	No
	INU	INU Loft	Diaht		INU	l eff	Diaht		INU Loft			INU
Larie Alignment Modion Width(m)	Leit	Leil	Right	RINA	Leit	Leil E O	Right	LINA		RINA	LINA	Leit
link Offeet(m)		0.0				0.0			0.0			0.0
Crocowalk Width(m)		10.0				10.0			0.0			0.0
		10.0				10.0			5.0			5.0
Headway Faster	1.00	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/n)	24	0	14	14	24	0	14	24	0	14	24	2
Number of Detectors	ا	Z		ا ا	ا	Z		ا ا	Z		1 - 44	Z
Detector Template	Leil 10.0	02.0		Leit	Leit	02.0		LUIL	02.0		10 C	02.0
Leading Detector (m)	18.6	93.0		18.0	18.0	93.0		18.0	93.0		18.6	93.0
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)		5.5		18.6		5.5			5.5			5.5
Detector 1 Type	CI+EX	CI+EX		CI+EX	CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX
Detector 1 Channel	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
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)		87.5				87.5			87.5			87.5
Detector 2 Size(m)		5.5				5.5			5.5			5.5
Detector 2 Type		CI+Ex				CI+Ex			CI+Ex			CI+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
Protected Phases		2				6			8			4
Permitted Phases	2			6	6			8			4	
Detector Phase	2	2		6	6	6		8	8		4	4

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Lane Group	SBR	
Lane		
Traffic Volume (vph)	43	
Future Volume (vph)	43	
Ideal Flow (vphpl)	1800	
Storage Length (m)	0.0	
Storage Lanes	0	
Taper Length (m)		
Lane Util. Factor	1.00	
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)	0	
Flt Permitted		
Satd, Flow (perm)	0	
Right Turn on Red	Yes	
Satd, Flow (RTOR)		
Link Speed (k/h)		
Link Distance (m)		
Travel Time (s)		
Confl Peds (#/hr)	11	
Confl Bikes (#/hr)	1	
Peak Hour Factor	1 00	
Heavy Vehicles (%)	3%	
Adi Flow (vph)	43	
Shared Lane Traffic (%)	70	
Lane Group Flow (vph)	٥	
Enter Blocked Intersection	No	
Lane Alignment	R NA	
Median Width(m)		
Link Offset(m)		
Crosswalk Width(m)		
Two way Left Turn Lane		
Hoodway Easter	1.06	
Turning Spood (k/h)	1.00	
Number of Detectors	14	
Detector Tompleto		
Leading Detector (m)		
Leading Detector (m)		
Detector (III)		
Detector 1 Position(m)		
Detector 1 Size(III)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector I Delay (s)		
Detector 2 Position(m)		
Detector 2 Size(m)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Protected Phases		
Permitted Phases		
Detector Phase		

J.Audia, Novatech

2: Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0		10.0	10.0		10.0	10.0
Minimum Split (s)	39.2	39.2		39.2	39.2	39.2		37.8	37.8		37.8	37.8
Total Split (s)	82.0	82.0		82.0	82.0	82.0		38.0	38.0		38.0	38.0
Total Split (%)	68.3%	68.3%		68.3%	68.3%	68.3%		31.7%	31.7%		31.7%	31.7%
Maximum Green (s)	75.8	75.8		75.8	75.8	75.8		31.2	31.2		31.2	31.2
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.0	3.0		3.0	3.0
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5		3.8	3.8		3.8	3.8
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0			0.0
Total Lost Time (s)	6.2	6.2			6.2	6.2			6.8			6.8
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
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max		None	None		None	None
Walk Time (s)	15.0	15.0		15.0	15.0	15.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	18.0	18.0		18.0	18.0	18.0		24.0	24.0		24.0	24.0
Pedestrian Calls (#/hr)	/	(4	4	4		1	1		11	11
Act Effet Green (s)	88.6	88.6			88.6	88.6			18.4			18.4
Actuated g/C Ratio	0.74	0.74			0.74	0.74			0.15			0.15
V/C Ratio	0.08	0.24			0.08	0.63			0.25			0.35
Control Delay	9.0	0.0			2.3	3.3			21.2			20.5
Queue Delay	0.0	0.0			0.0	0.0			0.0			0.0
	9.0	0.5			2.5	3.3 A			21.2			20.5
LUO Approach Delay	A	6 5			A	33			21.2			26.5
Approach LOS		0.5				J.J A			21.2			20.5
Oueue Length 50th (m)	0.4	11 5			0.9	28.8			54			94
Queue Length 95th (m)	3.5	33.8			m1.0	13.0			14.4			19. 4
Internal Link Dist (m)	0.0	467.4				118 1			188.5			249.4
Turn Bay Length (m)	100.0	+. <i>1</i> 0F			45.0	110.1			100.0			240.4
Base Capacity (vph)	158	2310			521	2473			407			390
Starvation Cap Reductn	0	0			0_1	6			0			000
Spillback Cap Reductn	0	0			0	0			0			0
Storage Cap Reductn	0	0			0	0			0			0
Reduced v/c Ratio	0.08	0.24			0.08	0.63			0.16			0.22
Intersection Summary												
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 22 (18%), Referenced	d to phase 2:E	BTL and 6:	WBTL, St	art of Gree	n							
Natural Cycle: 90												
Control Type: Actuated-Coor	dinated											
Maximum v/c Ratio: 0.63	_											
Intersection Signal Delay: 5.5				In	tersection	LOS: A						
Intersection Capacity Utilizat	ion /0.8%			IC	U Level o	t Service C						
Analysis Period (min) 15												

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Page & Innes



J.Audia, Novatech

Lane Group	SBR
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

	-	\rightarrow	-	+	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Lane Configurations	44	1	3	**	N	1	
Traffic Volume (vph)	559	68	52	1363	164	64	
Future Volume (vph)	559	68	52	1363	164	64	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		50.0	65.0		70.0	70.0	
Storage Lanes		1	1		1	0	
Taper Length (m)		•	80.0		20.0	· ·	
Lane Util, Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Ped Bike Factor	0.00	0.95	0.99	0.00	0.98	0.98	
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd, Flow (prot)	3357	1502	1679	3357	1679	1502	
Flt Permitted			0.431		0.950		
Satd, Flow (perm)	3357	1433	753	3357	1650	1477	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		68				64	
Link Speed (k/h)	60			60	50		
Link Distance (m)	94.7			238.7	204.5		
Travel Time (s)	5.7			14.3	14.7		
Confl. Peds. (#/hr)		11	11		5	5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	559	68	52	1363	164	64	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	559	68	52	1363	164	64	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	L NA	R NA	
Median Width(m)	5.0			5.0	3.7		
Link Offset(m)	0.0			0.0	0.0		
Crosswalk Width(m)	9.0			9.0	9.0		
Two way Left Turn Lane							
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	
Turning Speed (k/h)		14	24		24	14	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6	
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)	5.5	18.6	18.6	5.5	18.6	18.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	CI+Ex	CI+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)	87.5			87.5			
Detector 2 Size(m)	5.5			5.5			
Detector 2 Type	CI+EX			CI+EX			
Detector 2 Channel	0.0			0.0			
Detector 2 Extend (s)	0.0	D	D	0.0		_	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	2
Protected Phases	2	0	6	0	4	0	0
Permitted Phases	0	2	0	6	4	Õ	
Switch Phase	2	2	0	0	4	0	
Minimum Initial (a)	10.0	10.0	10.0	10.0	5 0	10.0	3.0
winimum initial (5)	10.0	10.0	10.0	10.0	5.0	10.0	5.0

Lane Group EBT EBR WBL WBT NBL NBR Ø3 Minimum Split (s) 31.2 31.2 31.2 31.2 31.2 31.2 31.2 31.3 37.3 30.0 Total Split (s) 73.0 73.0 73.0 73.0 17.0 47.0 30.0 Total Split (%) 60.8% 60.8% 60.8% 60.8% 14.2% 39.2% 25% Maximum Green (s) 66.8 66.8 66.8 66.8 10.7 40.7 28.0 Yellow Time (s) 2.5 2.5 2.5 3.0 3.0 0.0 Lead Time (s) 2.5 2.5 2.5 3.0 3.0 0.0 Lead/Lag Lag Lag Lead Lead Lead Lag Lead Lead/Lag C-Max C-Max C-Max C-Max None None None Walk Time (s) 7.0 7.0 7.0 7.0 7.0 7.0 1.0
Minimum Split (s) 31.2
Total Split (s) 73.0 73.0 73.0 73.0 73.0 73.0 17.0 47.0 30.0 Total Split (%) 60.8% 60.8% 60.8% 60.8% 60.8% 14.2% 39.2% 25% Maximum Green (s) 66.8 66.8 66.8 66.8 10.7 40.7 28.0 Yellow Time (s) 3.7 3.7 3.7 3.7 3.3 3.3 2.0 All-Red Time (s) 2.5 2.5 2.5 2.5 3.0 3.0 0.0 Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 6.3 6.3 Lead/Lag Lag Lag Lead Lead Lead Lag Lead Lead-Lag Optimize? 7.0 7.0 7.0 7.0 7.0 7.0 7.0 Vehicle Extension (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Recall Mode C-Max C-Max C-Max
Total Split (%) 60.8% 60.8% 60.8% 14.2% 39.2% 25% Maximum Green (s) 66.8 66.8 66.8 66.8 10.7 40.7 28.0 Yellow Time (s) 3.7 3.7 3.7 3.3 3.3 2.0 All-Red Time (s) 2.5 2.5 2.5 3.0 3.0 0.0 Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 6.3 Lead/Lag Lag Lead Lead Lead Lead Lead-Lag Optimize? Vehicle Extension (s) 3.0<
Maximum Green (s) 66.8 66.8 66.8 66.8 10.7 40.7 28.0 Yellow Time (s) 3.7 3.7 3.7 3.7 3.3 3.3 2.0 All-Red Time (s) 2.5 2.5 2.5 2.5 3.0 3.0 0.0 Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 6.3 Lead/Lag Lag Lead Lead Lead Lead Lead-Lag Optimize? Vehicle Extension (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Vehicle Extension (s) 7.0
Yellow Time (s) 3.7 3.7 3.7 3.7 3.3 3.3 2.0 All-Red Time (s) 2.5 2.5 2.5 2.5 3.0 3.0 0.0 Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 6.3 Lead Lead/Lag Lag Lag Lead Lead Lead Lead Lead-Lag Optimize? Vehicle Extension (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Recall Mode C-Max C-Max C-Max C-Max None None None Walk Time (s) 7.0 7.0 7.0 7.0 7.0 7.0 7.0 Flash Dont Walk (s) 18.0 18.0 18.0 18.0 18.0 18.0 10 10 Act Effet Green (s) 78.8 78.8 78.8 78.8 16.7 28.7 Actuated g/C Ratio 0.66 0.66 0.66 0.66 0.14 0.24
All-Red Time (s) 2.5 2.5 2.5 2.5 3.0 3.0 0.0 Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 6.3 6.3 Lead/Lag Lag Lag Lead Lead-Lag Optimize? Vehicle Extension (s) 3.0
Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 6.2 6.2 6.2 6.3 6.3 Lead/Lag Lag Lead Lead Lead Lead-Lag Optimize? Vehicle Extension (s) 3.0 3.
Total Lost Time (s) 6.2 6.2 6.2 6.2 6.3 6.3 Lead/Lag Lag Lag Lead Lead-Lag Optimize? Vehicle Extension (s) 3.0 <t< td=""></t<>
Lead/Lag Lag Lead Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode Vehicle Extension (s) 7.0
Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode C-Max None None <th< td=""></th<>
Vehicle Extension (s) 3.0 Recall Mode C-Max C-Max C-Max C-Max C-Max C-Max None
Recall Mode C-Max C-Max C-Max C-Max C-Max None None None None Walk Time (s) 7.0 <t< td=""></t<>
Walk Time (s) 7.0 7.0 7.0 7.0 7.0 Flash Dont Walk (s) 18.0 18.0 18.0 18.0 18.0 21.0 Pedestrian Calls (#/hr) 10 10 10 10 10 10 Act Effct Green (s) 78.8 78.8 78.8 78.8 16.7 28.7 Actuated g/C Ratio 0.66 0.66 0.66 0.14 0.24 v/c Ratio 0.25 0.07 0.11 0.62 0.70 0.16 Control Delay 7.3 1.3 6.2 11.0 67.5 7.5 Queue Delay 0.0 0.0 0.0 0.0 0.0 10 Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Flash Dont Walk (s) 18.0 18.0 18.0 18.0 18.0 18.0 21.0 Pedestrian Calls (#/hr) 10 10 10 10 10 10 10 10 Act Effct Green (s) 78.8 78.8 78.8 78.8 78.8 16.7 28.7 Actuated g/C Ratio 0.66 0.66 0.66 0.66 0.14 0.24 v/c Ratio 0.25 0.07 0.11 0.62 0.70 0.16 Control Delay 7.3 1.3 6.2 11.0 67.5 7.5 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Pedestrian Calls (#/hr) 10 10 10 10 10 10 Act Effct Green (s) 78.8 78.8 78.8 78.8 78.8 16.7 28.7 Actuated g/C Ratio 0.66 0.66 0.66 0.66 0.14 0.24 v/c Ratio 0.25 0.07 0.11 0.62 0.70 0.16 Control Delay 7.3 1.3 6.2 11.0 67.5 7.5 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Act Effct Green (s) 78.8 78.8 78.8 78.8 78.8 16.7 28.7 Actuated g/C Ratio 0.66 0.66 0.66 0.66 0.14 0.24 v/c Ratio 0.25 0.07 0.11 0.62 0.70 0.16 Control Delay 7.3 1.3 6.2 11.0 67.5 7.5 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Actuated g/C Ratio 0.66 0.66 0.66 0.14 0.24 v/c Ratio 0.25 0.07 0.11 0.62 0.70 0.16 Control Delay 7.3 1.3 6.2 11.0 67.5 7.5 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
v/c Ratio 0.25 0.07 0.11 0.62 0.70 0.16 Control Delay 7.3 1.3 6.2 11.0 67.5 7.5 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Control Delay 7.3 1.3 6.2 11.0 67.5 7.5 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Total Delay 7.3 1.3 6.2 11.0 67.5 7.5 LOS A A A B E A Approach Delay 6.7 10.8 50.6 A B D
LOS A A A B E A Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Approach Delay 6.7 10.8 50.6 Approach LOS A B D
Approach LOS A B D
Queue Length 50th (m) 15.6 0.0 1.6 22.1 33.1 0.0
Queue Length 95th (m) 22.6 1.6 m4.0 141.2 #79.5 8.6
Internal Link Dist (m) 70.7 214.7 180.5
Turn Bay Length (m) 50.0 65.0 70.0 70.0
Base Capacity (vph) 2203 963 494 2203 233 543
Starvation Cap Reductn 0 0 0 0 0 0
Spillback Cap Reductn 0 0 0 0 0 0
Storage Cap Reductn 0 0 0 0 0 0
Reduced v/c Ratio 0.25 0.07 0.11 0.62 0.70 0.12
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 24 (20%) Referenced to phase 2:ERT and 6:WRTL Start of Green
Natural Cycle: 90
Control Type: Actuated Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 13.7
Intersection Capacity Itilization 50.8%
Analysis Parind (min) 15
95th nercentile volume exceeds canacity, queue may be longer
π our percentile volume exceeds capacity, queue may be longer.
Mucue shown is maximum aller two cycles. m. Volume for 95th percentile queue is metered by unstream signal

Splits and Phases: 3: Lamarche & Innes

		▲ Ø4
73 s	30 s	17 s
₩ Ø6 (R)	1Ø8	
73 s	47 s	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	≜ 1⊾		N	≜1 ⊾			្ឋ	1		4	
Traffic Volume (vph)	6	516	38	12	1410	4	99	0	39	1	0	3
Future Volume (vph)	6	516	38	12	1410	4	99	0	39	1	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	80.0			30.0			20.0			20.0		
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			1.00	0.99		0.99	
Frt		0.990							0.850		0.899	
Flt Protected	0.950			0.950				0.950			0.988	
Satd, Flow (prot)	1712	3112	0	1712	3357	0	0	1712	1532	0	1583	0
Elt Permitted	0.161	•		0.445			•	0.755		· ·	0.942	
Satd Flow (perm)	290	3112	0	802	3357	0	0	1357	1511	0	1509	0
Right Turn on Red		•	Yes	001		Yes	•		Yes	· ·		Yes
Satd, Flow (RTOR)		14							39		28	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		238.7			292.8			151.9			62.6	
Travel Time (s)		14.3			17.6			13.7			5.6	
Confl Peds (#/hr)	7	11.0			17.0	7	2	10.1	1	1	0.0	2
Confl Bikes (#/hr)	,					1	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 (%)	1%	1.00	1.00	1%	3%	1%	1%	1%	1%	1%	1%	1%
Adi Flow (vph)	6	516	38	12	1/10	170	90	1 /0	20	1 /0	0	1/0
Shared Lane Traffic (%)	0	510	50	12	1410	т	55	U	00	I	U	5
Lane Group Flow (vph)	6	55/	٥	12	1/1/	0	0	QQ	20	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment		Loft			Loft			Loft			Loft	
Median Width(m)	LINA	5.0			5.0		LINA					
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		0.0 Q ()			0.0 Q ()			0.0 Q ()			0.0 Q ()	
		5.0			5.0			5.0			5.0	
Headway Eactor	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	24	1.00	1.00
Number of Detectors	24	2	14	24	2	14	24	2	14	2 4 1	2	14
Detector Tomplate	Loff	Thru		Loft	Z		Loft	Z	Dight	Loft	Thru	
Loading Detector (m)	18.6	03.0		18.6	03.0		18.6	03.0	18.6	18.6	03.0	
Trailing Detector (m)	10.0	95.0		10.0	95.0		0.0	95.0	10.0	10.0	95.0	
Detector 1 Desition(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	18.6	0.0		18.6	0.0		18.6	0.0	18.6	18.6	0.0	
Detector 1 Turno												
Detector 1 Channel					CI+EX		CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	
Detector 1 Channel	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Exterio (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delev (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 7 Detay (S)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		01.0 E E			07.0 E E			01.3 E E			01.0 E E	
Detector 2 Size(III)		0.5			0.0			0.0			0.0	
Detector 2 Type		CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Channel		• •			0.0			0.0			• •	
Detector 2 Extend (S)	D	0.0		Derm	0.0		Derm	0.0	Derm	Derma	0.0	
	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	^	2		^	6		^	8	^	_	4	
Permitted Phases	2	•		6	•		8	•	8	4		
Detector Phase	2	2		6	6		8	8	8	4	4	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	87.0	87.0		87.0	87.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	72.5%	72.5%		72.5%	72.5%		27.5%	27.5%	27.5%	27.5%	27.5%	
Maximum Green (s)	80.9	80.9		80.9	80.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	1	1		7	7		1	1	1	2	2	
Act Effct Green (s)	92.0	92.0		92.0	92.0			15.6	15.6		15.6	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.13	0.13		0.13	
v/c Ratio	0.03	0.23		0.02	0.55			0.56	0.17		0.02	
Control Delay	4.3	3.6		4.9	7.4			59.7	14.0		0.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	4.3	3.6		4.9	7.4			59.7	14.0		0.2	
LOS	А	А		А	А			E	В		А	
Approach Delay		3.6			7.4			46.8			0.3	
Approach LOS		А			А			D			А	
Queue Length 50th (m)	0.2	10.8		0.5	51.3			20.8	0.0		0.0	
Queue Length 95th (m)	m1.0	15.7		2.6	98.8			33.3	8.3		0.0	
Internal Link Dist (m)		214.7			268.8			127.9			38.6	
Turn Bay Length (m)	65.0			40.0								
Base Capacity (vph)	222	2387		614	2572			301	366		357	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.03	0.23		0.02	0.55			0.33	0.11		0.01	
Intersection Summary												
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 4 (3%), Referenced to	phase 2:EBI	L and 6:WI	BTL, Start	of Green								
Natural Cycle: 70												
Control Type: Actuated-Coord	linated											
Maximum v/c Ratio: 0.56												
Intersection Signal Delay: 8.9	04.424			In	tersection	LOS: A						
Intersection Capacity Utilization	on 64.4%			IC	U Level of	Service C						
Analysis Period (min) 15 m Volume for 95th percentile	e queue is m	etered by u	pstream s	ignal.								

Splits and Phases: 4: 473 E of Page & Innes



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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	5	44	≜t ⊾			1
Traffic Volume (vph)	10	627	1522	5	0	8
Future Volume (vph)	10	627	1522	5	0	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	25.0			0.0	0.0	0.0
Storage Lanes	1			0	0	1
Taper Length (m)	55.0				20.0	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1712	3357	3357	0	0	1559
Flt Permitted	0.950					
Satd. Flow (perm)	1712	3357	3357	0	0	1559
Link Speed (k/h)		60	60		30	
Link Distance (m)		142.1	94.7		74.6	
Travel Time (s)		8.5	5.7		9.0	
Confl. Peds. (#/hr)	5			5		
Confl. Bikes (#/hr)				1		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	3%	1%	1%	1%
Adj. Flow (vph)	10	627	1522	5	0	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	627	1527	0	0	8
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	L NA	Left	Left	R NA	L NA	R NA
Median Width(m)		5.0	5.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		9.0	9.0		9.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	97			97	97	97
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 54.6%			IC	U Level of	Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	88	**	1	×	**	1	8	**	1	×	**	1
Traffic Volume (vph)	596	1744	163	65	763	153	66	232	107	200	248	209
Future Volume (vph)	596	1744	163	65	763	153	66	232	107	200	248	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0			40.0			10.0		I.	20.0		
Lane Litil Factor	0.07	0 95	1 00	1 00	0.95	1 00	1 00	0.95	1 00	1 00	0.95	1 00
Ped Bike Factor	0.07	0.00	0.0/	1.00	0.00	0.07	0.00	0.00	0.96	0.98	0.00	0.97
Frt	0.00		0.850	1.00		0.850	0.00		0.850	0.00		0.850
Fit Protected	0 950		0.000	0 950		0.000	0 950		0.000	0 950		0.000
Satd Flow (prot)	3288	3357	1532	1712	3293	1517	1712	3390	1532	1712	3390	1532
Elt Permitted	0200	0001	1002	0.950	0200	1017	0.456	0000	1002	0.607	0000	1002
Satd Flow (perm)	3263	3357	1//6	1705	3203	1/175	811	3300	1/73	1072	3300	1/180
Right Turn on Red	0200	0001	Yes	1705	5255	Yes	011	0000	Yes	1072	0000	Yes
Satd Flow (RTOR)			130			105			13/			209
Link Speed (k/b)		60	100		60	155		50	10-		50	205
Link Distance (m)		264.5			101 /			387.7			301.0	
Travel Time (s)		15.0			20.5			27.0			21.7	
Confl Pede (#/br)	7	15.5	22	22	23.5	7	15	21.5	18	18	21.7	15
Confl. Pikos (#/hr)	I		1	22		3	IJ		10	10		15
Book Hour Easter	1 00	1 00	1 00	1 00	1 00	1 00	1.00	1.00	1 00	1 00	1 00	1 00
Hoppy Vohiolog (%)	20/	30/	1.00	1.00	F%	2%	1.00	20/	1.00	1.00	20/	1.00
Adi Elow (vph)	Z /0 506	17//	163	65	763	2 /0 153	66	2 /0	1/0	200	2/0	200
Shared Lano Traffic (%)	090	1744	105	05	703	100	00	232	107	200	240	209
	506	17//	163	65	763	153	66	222	107	200	2/18	200
Enter Blocked Intersection	090 No	1744 No	No	No	703 No	No	No	ZJZ	IU/	200	240 No	209 No
Long Alignment		INU Loff			INU Loff			INU			INU Loff	
Lane Alignment Modion Width(m)	LINA		RINA	LINA		RINA	LINA	Leit	RINA	LINA	Leit 6.0	RINA
Link Offect(m)		9.0			7.4			0.0			0.0	
Crosswelk Width(m)		5.0			0.0 5.0			0.0 E 0			0.0 5.0	
		5.0			5.0			5.0			5.0	
Hoodway Easter	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turping Speed (k/b)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Number of Detectors	24	2	14	24	2	14	24	2	14	24	2	14
Detector Tompleto	l off	Z	Diabt	l off	Z	Diabt	l off	Z	Diabt	l off	Z	Diabt
Loading Detector (m)	18 G	03.0	18.6	18.6	03.0	18.6	18.6	03.0	18.6	18.6	03.0	18.6
Trailing Detector (m)	10.0	95.0	10.0	10.0	93.0	10.0	10.0	93.0	10.0	0.0	93.0	10.0
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)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	0.0 5.5	18.6	18.6	5.5	18.6
Detector 1 Type												
Detector 1 Channel	CITEX	OI+EX	OI+EX		OI+EX		CITEX	CITEX	OI+EX	OI+EX		
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 Quoup (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)	0.0	87.5	0.0	0.0	87.5	0.0	0.0	87.5	0.0	0.0	87.5	0.0
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Size(III)												
Detector 2 Channel												
Detector 2 Extend (c)		0.0			0.0			0.0			0.0	
	Drot	0.0 NIA	Dorm	Prot	0.0 NIA	Dorm	nm⊥nt		Dorm	Dorm	0.0 NIA	Dorm
Protected Phases	FIUL		Felli	1	NA 6	Feilli	pin+pi	0	Fellin	Feilii	INA A	Fenn
Permitted Phases	5	2	2	1	0	6	2 Q	0	Q	Λ	4	1
Detector Phases	F	0	2	1	6	0	0	0	0	4	1	4
DELECTOR FILASE	5	2	2		0	U	3	0	0	4	4	4

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	50	10.0	10.0	50	10.0	10.0	50	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	35.0	71.0	71.0	12.0	48.0	48.0	12.0	47.0	47.0	35.0	35.0	35.0
Total Split (%)	26.9%	54.6%	54.6%	9.2%	36.9%	36.9%	9.2%	36.2%	36.2%	26.9%	26.9%	26.9%
Maximum Green (s)	28.4	64.8	64.8	5.8	41.8	41.8	5.3	40.3	40.3	28.3	28.3	28.3
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)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	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	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.2	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?		- 0	- 0		- 0	- 0				- 0	- 0	J
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		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		22	22		7	7		32	32	15	15	15
Act Effct Green (s)	26.9	67.9	67.9	6.2	46.9	46.9	36.7	36.7	36.7	27.1	27.1	27.1
Actuated g/C Ratio	0.21	0.52	0.52	0.05	0.36	0.36	0.28	0.28	0.28	0.21	0.21	0.21
v/c Ratio	0.88	0.99	0.20	0.79	0.64	0.23	0.25	0.24	0.21	0.90	0.35	0.44
Control Delay	64.9	51.9	4.7	105.6	46.0	10.3	35.3	35.6	3.6	88.3	45.1	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.9	51.9	4.7	105.6	46.0	10.3	35.3	35.6	3.6	88.3	45.1	8.6
LOS	E	D	А	F	D	В	D	D	А	F	D	A
Approach Delay		51.9			44.4			27.1			46.7	
Approach LOS		D			D			С			D	
Queue Length 50th (m)	69.7	~234.1	2.8	15.6	78.9	1.9	11.2	21.3	0.0	45.8	26.2	0.0
Queue Length 95th (m)	#90.5	#273.0	13.4	#41.7	106.2	18.1	21.4	31.1	7.2	#85.0	37.7	18.5
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	718	1754	822	82	1187	656	266	1050	549	233	737	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.99	0.20	0.79	0.64	0.23	0.25	0.22	0.19	0.86	0.34	0.43
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 125 (96%), Referenced	to phase 2:	EBT and 6	:WBT, Sta	rt of Greer	ı							
Natural Cycle: 125												
Control Type: Actuated-Coordin	nated											
Maximum v/c Ratio: 0.99												
Intersection Signal Delay: 47.3				In	tersection	LOS: D						
Intersection Capacity Utilization	า 102.6%			IC	CU Level o	f Service G						
Analysis Period (min) 15												
~ Volume exceeds capacity,	queue is the	oretically i	nfinite.									
Queue shown is maximum a	after two cyc	cles.										
 95th percentile volume exc Queue shown is maximum a 	eeds capaci after two cvo	ty, queue i cles.	may be lon	ger.								
	. 0											
Splits and Phases: 1: Orlean	is & innes											

 Ø1
 Ø2 (R)

 12s
 71s

 Ø5
 Ø6 (R)

 35s
 48s

2: Page & Innes PM Peak Hour

Lane Configurations Feb EBT EBT VBIU WBIT WBIT <th></th> <th>٦</th> <th>-</th> <th>\mathbf{i}</th> <th>F</th> <th>4</th> <th>←</th> <th>•</th> <th>•</th> <th>1</th> <th>۲</th> <th>1</th> <th>Ŧ</th>		٦	-	\mathbf{i}	F	4	←	•	•	1	۲	1	Ŧ
Lane Configurations Y H	Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Tarfie Volume (uph) 63 1773 30 6 93 850 64 23 7 77 54 18 ikeal Row (uph) 1800 <td< td=""><td>Lane Configurations</td><td>5</td><td>≜1⊾</td><td></td><td></td><td>X</td><td>≜1⊾</td><td></td><td></td><td>\$</td><td></td><td></td><td>4</td></td<>	Lane Configurations	5	≜1 ⊾			X	≜1 ⊾			\$			4
Future Volume (wh) 63 1779 30 6 93 860 64 23 7 77 54 180 Storage Length (m) 1000 1000 1800 100 0 0 0 170 100 <td< td=""><td>Traffic Volume (vph)</td><td>63</td><td>1779</td><td>30</td><td>6</td><td>93</td><td>860</td><td>64</td><td>23</td><td>7</td><td>77</td><td>54</td><td>18</td></td<>	Traffic Volume (vph)	63	1779	30	6	93	860	64	23	7	77	54	18
issai Flow (vph) 1800	Future Volume (vph)	63	1779	30	6	93	860	64	23	7	77	54	18
Shorage Length (m) 100.0 0.0 0.0 0.0 0.0 0.0 0.0 Taper Length (m) 35.0 55.0 2.5 0 0 0 Lame Ulti, Factor 1.00 0.95 0.95 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.98 0.990 0.993 0.993 0.993 0.955 Ped Bike Factor 0.00 0.054 0.999 0.976 0.956 0.999 0.977 0.7754 Satd. Flow (prot) 1695 0.950 0.054 0.917 0.7754 0.01212 5 5 1212 5 384 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 12 5 5 1212 5 225 234 120 121 121 121 121 121 121 121 121 121 121	Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Lanes 1 0 0 0 0 Taper Length (m) 35.0 55.0 2.5 2.5 Lane Ulit, Factor 1.00 0.95 0.95 0.95 0.95 0.93 0.93 0.93 Ped Bike Factor 1.00 1.00 0.950 0.990 0.903 0.995 FIP Poteted 0.950 0.950 0.954 0.917 0.744 Stat, Flow (prot) 1695 330 0.0 964 225 2 Stat, Flow (prot) 1695 330 0.0 964 225 0 1427 0 0 1211 Right Tum on Red Yes 0 955 13 13 2 2 2 68 18 1 1 1 1 1 1 1 1 2 25 5 9 5 13 13 2 66 1 1 1 1 1 1 1 1 1	Storage Length (m)	100.0		0.0		45.0		0.0	0.0		0.0	0.0	
Tape function 35.0 55.0 2.5 2.5 Lane UHL Factor 1.00 0.95 0.95 1.00 </td <td>Storage Lanes</td> <td>1</td> <td></td> <td>0</td> <td></td> <td>1</td> <td></td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>0</td> <td></td>	Storage Lanes	1		0		1		0	0		0	0	
Lane Ulti Factor 100 0.95 0.95 100 0.95 0.95 100 1.01 1.21 2.21 2.25	Taper Length (m)	35.0		•		55.0			25		· ·	25	
Pack Bike Fetor 1.00 1.00 1.00 0.00 0.00 0.00 0.038 1.00 0.038 0.990 0.9903 0.995 Fit Otected 0.950 0.960 0.960 0.960 0.963 0.955 Satid Flow (ptot) 1695 3380 0 0 1694 3258 0 0.1541 0 0.754 Satid Flow (perm) 549 3380 0 0 96 3258 0 0.1427 0 0 107 Satid Flow (perm) 549 3380 0 0 96 3258 0 0 1427 0 0 121 Satid Flow (Perm) 54 3380 0 0 96 3258 0 0 1427 0 0 121 5 5 9 5 13 13 13 13 13 16 160 100 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 <td>Lane Util Factor</td> <td>1 00</td> <td>0.95</td> <td>0.95</td> <td>0.95</td> <td>1 00</td> <td>0.95</td> <td>0.95</td> <td>1 00</td> <td>1 00</td> <td>1 00</td> <td>1 00</td> <td>1 00</td>	Lane Util Factor	1 00	0.95	0.95	0.95	1 00	0.95	0.95	1 00	1 00	1 00	1 00	1 00
Fri Instruction Instruction <thinstruction< th=""> <thins< td=""><td>Ped Bike Factor</td><td>1.00</td><td>1 00</td><td>0.00</td><td>0.00</td><td>1.00</td><td>1.00</td><td>0.00</td><td>1.00</td><td>0.98</td><td>1.00</td><td>1.00</td><td>0.99</td></thins<></thinstruction<>	Ped Bike Factor	1.00	1 00	0.00	0.00	1.00	1.00	0.00	1.00	0.98	1.00	1.00	0.99
Pit Protected 0.950 0.950 0.960 0.989 0.976 Satd. Flow (prot) 1695 3380 0 0 1694 3258 0 0.911 0.076 Satd. Flow (perm) 549 3380 0 0 96 3258 0 0 1427 0 0 127 Satd. Flow (perm) 549 3380 0 0 96 3258 0 0 1427 0 0 121 Satd. Flow (prom) 549 3380 0 0 96 3258 0 0 1427 0 0 121 Satd. Flow (PTOR) 2 12 68 18 14 1421 212.5 273.4 Conf. Beds. (#hhy) 9 5 5 9 5 13 13 1 20 1 1 245.4 14 24.2 14 24.2 7 77 54 18 5 19.2 13 100	Frt	1.00	0.998				0,990			0.903			0.955
Statl, Flow (pot) 1695 3380 0 0 1694 3258 0 0 1541 0 0 1578 FI Permitted 0.309 0.064 0.917 0.734 0.734 0.734 0.734 0.742 0 121 0.754 0.754 0.754 0.754 0.754 0.754 0.754 0.754 0.754 0.754 0.755 755 9 5 13.1 24.65 Conf. Bikes (Hrh) 9 5 5 9 5 13.1 13 14.744 142.1 212.5 273.4 77 54 18 78.7 78.5 19.1 1.00	Elt Protected	0 950	0.000			0 950	0.000			0.989			0.000
Data Hompson Obso O <tho< th=""> O O</tho<>	Satd Flow (prot)	1695	3380	0	0	1694	3258	0	0	1541	0	0	1578
Internation 0.007 0.007 0.007 0.007 Righ Turn on Red Yes Yes Yes Yes Satil Flow (FOR) 2 12 68 18 Link Speed (kh) 60 60 40 40 Link Distance (m) 491.4 142.1 212.5 273.4 Travel Time (s) 29.5 8.5 19.1 24.6 Confl. Bikes (khn) 1 1 1 1 Peak Hour Factor 1.00 <t< td=""><td>Elt Permitted</td><td>0 300</td><td>0000</td><td>U</td><td>U</td><td>0.05/</td><td>0200</td><td>0</td><td>U</td><td>0 017</td><td>U</td><td>U</td><td>0 754</td></t<>	Elt Permitted	0 300	0000	U	U	0.05/	0200	0	U	0 017	U	U	0 754
Data Data <thdata< th=""> Data Data <thd< td=""><td>Satd Flow (perm)</td><td>5/19</td><td>3380</td><td>0</td><td>٥</td><td>90.00</td><td>3258</td><td>0</td><td>0</td><td>1/27</td><td>٥</td><td>0</td><td>1211</td></thd<></thdata<>	Satd Flow (perm)	5/19	3380	0	٥	90.00	3258	0	0	1/27	٥	0	1211
Instrument Ites	Right Turn on Red	040	0000	Ves	U	30	5250	Ves	U	1421	Ves	U	1211
Salar. Non (Vicinity) 2 12 00 10 Link Speed (kh) 60 40 40 Link Speed (kh) 914 142,1 212,5 273,4 Confl. Peds. (#hr) 9 5 5 9 5 13 13 Confl. Peds. (#hr) 1 1 1 1 1 1 Peak Hour Factor 1.00 <td>Satd Flow (PTOP)</td> <td></td> <td>2</td> <td>103</td> <td></td> <td></td> <td>12</td> <td>163</td> <td></td> <td>68</td> <td>163</td> <td></td> <td>18</td>	Satd Flow (PTOP)		2	103			12	163		68	163		18
Link Distance (m) 40 70 70 71 273.4 Confl. Bikes (#hr) 1 1 1 1 1 212.5 1 31 31 Confl. Bikes (#hr) 1 1 1 1 1 1 1 1 212.5 1 1 212.5 1 1 212.5 1 1 212.5 213.4 1 212.5 213.4 1 212.5 213.4 1 212.5 213.4 1 212.5 213.4 1 212.5 213.4 1 212.5 213.4 1 212.5 213.4 1 212.5 1 212.5 1 212.5 1 212.5 1 212.5 1 212.5 1	Link Spood (k/b)		60				60			40			10
Link Distince (III) +31,4 142,1 212,3 213,3 Confl. Peds, (#hr) 9 5 5 9 5 1 Confl. Bikes (#hr) 1 1 1 1 1 Peak Hour Factor 1,00	Link Distance (m)		401.4				142.1			910 E			972 /
Indexiniting (s) 29.3 6.3 19.1 24.0 24.0 Confl. Reist, (#hr) 1 1 1 1 1 1 Peak Hour Factor 1.00 <td></td> <td></td> <td>491.4</td> <td></td> <td></td> <td></td> <td>14Z.1</td> <td></td> <td></td> <td>212.0</td> <td></td> <td></td> <td>213.4</td>			491.4				14Z.1			212.0			213.4
Com. Texes. (#m) 9 5 5 9 5 1 Peak Hour Factor 1.00	Confl Dada (#/hr)	٥	29.5	F		F	ö.5	0	F	19.1	10	10	24.0
Cont. Bites (#nf) 1 <th1< th=""> <th1< th=""> <th1< th=""></th1<></th1<></th1<>	Confil. Peas. (#/nr)	9		Э 4		ວ		9	Э		13	13	
Peak Hour Factor 1.00	Confil. Bikes (#/nr)	4.00	4.00	1 00	4 00	4.00	4.00	4.00	4.00	4.00	1 00	4.00	4.00
Heavy Vehicles (%) 2% 2% 5% 3% 2% 5% 1% 3% 6% 1% Adi, Flow (vph) 63 1779 30 6 93 860 64 23 7 77 54 18 Shared Lane Traffic (%) 0 0 107 0 0 108 Enter Blocked Intersection No N	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. How (vph) 63 1/7 30 6 93 860 64 23 7 7/7 54 18 Lane Group Flow (vph) 63 1809 0 0 99 924 0 0 107 0 0 108 Enter Blocked Intersection No	Heavy Vehicles (%)	2%	2%	6%	3%	2%	5%	2%	5%	1%	3%	6%	1%
Shared Lane Group Flow (vph) 63 1809 0 0 99 924 0 0 107 0 0 108 Enter Blocked Intersection No	Adj. Flow (vph)	63	1779	30	6	93	860	64	23	(11	54	18
Lane Group Flow (vph) 63 1809 0 0 99 924 0 0 107 0 0 108 Enter Blocked Intersection No	Shared Lane Traffic (%)												
Enter Blocked Intersection No No <th< td=""><td>Lane Group Flow (vph)</td><td>63</td><td>1809</td><td>0</td><td>0</td><td>99</td><td>924</td><td>0</td><td>0</td><td>107</td><td>0</td><td>0</td><td>108</td></th<>	Lane Group Flow (vph)	63	1809	0	0	99	924	0	0	107	0	0	108
Lane Alignment Left Left Right R NA Left Left Right L NA Left R NA L NA Left Main Main Left Right L NA Left R NA L NA Left Main Left R NA L NA Left Main Main Left Main Left R NA L NA Left Main Left Main Left Left Left L NA Left R NA L NA Left Main Main Main Left L NA Left L NA Left L NA L NA Left L NA L NA L NA Left L NA L NA <thl na<="" th=""> L NA L NA<td>Enter Blocked Intersection</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>Yes</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td></thl>	Enter Blocked Intersection	No	No	No	No	No	Yes	No	No	No	No	No	No
Median Width(m) 5.0 0.0 0.0 0.0 Link Offset(m) 0.0 0.0 0.0 0.0 0.0 Crosswalk Width(m) 10.0 10.0 5.0 5.0 5.0 Two way Left Turn Lane	Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA	Left
Link Offset(m) 0.0 0.0 0.0 0.0 0.0 Crosswalk Width(m) 10.0 10.0 5.0 5.0 Two way Left Turn Lane	Median Width(m)		5.0				5.0			0.0			0.0
Crosswalk Width(m) 10.0 5.0 5.0 Two way Left Turn Lane 1.06 1.00 1.00 1.00	Link Offset(m)		0.0				0.0			0.0			0.0
Two way Left Turn Lane Headway Factor 1.06	Crosswalk Width(m)		10.0				10.0			5.0			5.0
Headway Factor 1.06<	Two way Left Turn Lane												
Turning Speed (k/h) 24 14 14 24 14 24 14 24 14 24 Number of Detectors 1 2 1 1 2 1 2 1 2 1 2 Detector Template Left Thru Thru	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
Number of Detectors 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 1	Turning Speed (k/h)	24		14	14	24		14	24		14	24	
Detector Template Left Thru Left <td>Number of Detectors</td> <td>1</td> <td>2</td> <td></td> <td>1</td> <td>1</td> <td>2</td> <td></td> <td>1</td> <td>2</td> <td></td> <td>1</td> <td>2</td>	Number of Detectors	1	2		1	1	2		1	2		1	2
Leading Detector (m) 18.6 93.0 18.6 18.6 93.0 10.0 <	Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Trailing Detector (m) 0.0	Leading Detector (m)	18.6	93.0		18.6	18.6	93.0		18.6	93.0		18.6	93.0
Detector 1 Position(m) 0.0	Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Size(m) 18.6 5.5 18.6 18.6 5.5 18.6 5.5 Detector 1 Type CI+Ex O 0.0 <td>Detector 1 Position(m)</td> <td>0.0</td> <td>0.0</td> <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td> <td>0.0</td> <td>0.0</td> <td></td> <td>0.0</td> <td>0.0</td>	Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Type Cl+Ex O.0 0.0	Detector 1 Size(m)	18.6	5.5		18.6	18.6	5.5		18.6	5.5		18.6	5.5
Detector 1 Channel Detector 1 Extend (s) 0.0 <	Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex		CI+Ex	Cl+Ex		CI+Ex	CI+Ex
Detector 1 Extend (s) 0.0	Detector 1 Channel												
Detector 1 Queue (s) 0.0	Detector 1 Extend (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	Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(m) 87.5 87.5 87.5 87.5 87.5 Detector 2 Size(m) 5.5 5.5 5.5 5.5 5.5 Detector 2 Type CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex Detector 2 Channel 0.0 0.0 0.0 0.0 0.0 0.0 Turn Type Perm NA pm+pt pm+pt NA Perm NA Protected Phases 2 1 1 6 8 4 Detector Phase 2 2 1 1 6 8 4	Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Size(m) 5.5 5.5 5.5 5.5 Detector 2 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 2 Channel 0.0 0.0 0.0 0.0 Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Turn Type Perm NA pm+pt pm+pt NA Perm NA Protected Phases 2 1 1 6 8 4 Permitted Phases 2 2 1 1 6 8 4	Detector 2 Position(m)		87.5				87.5			87.5			87.5
Detector 2 Type CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex Detector 2 Channel 0.0 0.0 0.0 0.0 0.0 Detector 2 Extend (s) 0.0 0.0 0.0 0.0 0.0 Turn Type Perm NA pm+pt pm+pt NA Perm NA Protected Phases 2 1 1 6 8 4 Permitted Phases 2 2 1 1 6 8 4	Detector 2 Size(m)		5.5				5.5			5.5			5.5
Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Turn Type Perm NA pm+pt pm+pt NA Perm NA Protected Phases 2 1 1 6 8 4 Permitted Phases 2 6 6 8 4 Detector Phase 2 2 1 1 6 8 4 4	Detector 2 Type		CI+Ex				Cl+Ex			Cl+Ex			CI+Ex
Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Turn Type Perm NA pm+pt pm+pt NA Perm NA Perm NA Protected Phases 2 1 1 6 8 4 Permitted Phases 2 6 6 8 8 4 Detector Phase 2 2 1 1 6 8 8 4 4	Detector 2 Channel												
Turn Type Perm NA pm+pt pm+pt NA Perm NA Perm NA Protected Phases 2 1 1 6 8 4 Permitted Phases 2 6 6 8 4 Detector Phase 2 2 1 1 6 8 4	Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Protected Phases 2 1 1 6 8 4 Permitted Phases 2 6 6 8 4 Detector Phase 2 2 1 1 6 8 4	Turn Type	Perm	NA		pm+pt	pm+pt	NA		Perm	NA		Perm	NA
Permitted Phases 2 6 6 8 4 Detector Phase 2 2 1 1 6 8 4 4	Protected Phases	. •	2		1	1	6			8			4
Detector Phase 2 2 1 1 6 8 8 4 4	Permitted Phases	2	_		6	6	v		8	v		4	
	Detector Phase	2	2		1	1	6		8	8		4	4

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Lane Group	SBR	
Lane		
Traffic Volume (vph)	36	
Future Volume (vph)	36	
Ideal Flow (vphpl)	1800	
Storage Length (m)	0.0	
Storage Lanes	0	
Taper Length (m)	-	
Lane Util Factor	1 00	
Ped Bike Factor	1.00	
Frt		
Elt Protected		
Satd Flow (prot)	0	
Elt Permitted	0	
Satd Flow (perm)	٥	
Right Turn on Red	Ves	
Satd Flow (PTOP)	163	
Link Spood (k/b)		
Link Distance (m)		
Travel Time (c)		
Confl Dodo (#/br)	F	
Confl. Peus. (#/III)	5	
Conii. Bikes (#/iii)	1.00	
Peak Hour Factor	1.00	
Heavy Venicles (%)	11%	
Adj. Flow (vpn)	30	
Shared Lane Traffic (%)	0	
Lane Group Flow (vpn)	U	
Enter Blocked Intersection	NO	
Lane Alignment	R NA	
Median Width(m)		
Link Offset(m)		
Crosswalk Width(m)		
Two way Left Turn Lane		
Headway Factor	1.06	
Turning Speed (k/h)	14	
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)		
Turn Type		
Protected Phases		
Permitted Phases		
Detector Phase		

J.Audia, Novatech

2: Page & Innes PM Peak Hour

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	EDI	EDT			* \\//DI			NDI			CDI	CDT
Switch Phase	EDL	EDI	EDR	VIDU	VVDL	VVDI	WDR	INDL	INDI	NDN	ODL	301
Minimum Initial (s)	10.0	10.0		5.0	5.0	10.0		10.0	10.0		10.0	10.0
Minimum Solit (s)	30.2	30.2		11.2	11.2	30.2		37.8	37.8		37.8	37.8
Total Solit (s)	80.0	80.0		12.0	12.0	92.0		38.0	38.0		38.0	38.0
Total Split (%)	61.5%	61.5%		9.2%	9.2%	70.8%		29.2%	29.2%		29.2%	29.2%
Maximum Green (s)	73.8	73.8		5.8	5.8	85.8		31.2	31.2		31.2	31.2
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.0	3.0		3.0	3.0
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5		3.8	3.8		3.8	3.8
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0			0.0
Total Lost Time (s)	6.2	6.2			6.2	6.2			6.8			6.8
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	C-Max	C-Max		None	None	C-Max		None	None		None	None
Walk Time (s)	15.0	15.0				15.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	18.0	18.0				18.0		24.0	24.0		24.0	24.0
Pedestrian Calls (#/hr)	5	5				9		13	13		5	5
Act Effct Green (s)	84.2	84.2			97.4	97.4			19.6			19.6
Actuated g/C Ratio	0.65	0.65			0.75	0.75			0.15			0.15
v/c Ratio	0.18	0.83			0.63	0.38			0.39			0.55
Control Delay	3.4	5.6			49.2	4.5			22.5			50.4
Queue Delay	0.0	0.0			0.0	0.0			0.0			0.0
Total Delay	3.4	5.6			49.2	4.5			22.5			50.4
LOS	A	A			D	A			C			D
Approach Delay		5.6				8.8			22.5			50.4
Approach LOS	4.0	A			7.0	A			C			D
Queue Length 50th (m)	1.6	28.8			1.6	20.9			0.6			20.8
Queue Length 95th (m)	m2.3	m32.8			#35.0	26.0			21.6			33.7
Internal Link Dist (m)	100.0	467.4			45.0	118.1			188.5			249.4
Turn Bay Length (m)	100.0	0400			45.0	0444			204			204
Staryation Con Deducto	300	2100			001	2444			394			304
Starvation Cap Reductin	0	0			0	0			0			0
Spillback Cap Reductin	0	0			0	0			0			0
Reduced v/c Ratio	0.18	0.83			0.63	0.38			0.27			0.36
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 122 (94%), Reference	ed to phase 2:	EBTL and 6	S:WBTL, S	Start of Gre	en							
Natural Cycle: 120												
Control Type: Actuated-Coord	dinated											
Maximum v/c Ratio: 0.83												
Intersection Signal Delay: 8.8				Int	tersection	LOS: A						
Intersection Capacity Utilization	on 90.0%			IC	U Level o	f Service E						

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Page & Innes



Lane Group	SBR
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

	-	\rightarrow	-	+	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Lane Configurations	**	1	X	**	×	1	
Traffic Volume (vph)	1606	169	76	935	126	60	
Future Volume (vph)	1606	169	76	935	126	60	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		50.0	65.0		70.0	70.0	
Storage Lanes		1	1		1	0	
Taper Length (m)			80.0		20.0		
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Ped Bike Factor		0.96			0.97	0.98	
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	3357	1502	1679	3357	1679	1502	
Flt Permitted			0.099		0.950		
Satd. Flow (perm)	3357	1449	175	3357	1621	1476	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		122				34	
Link Speed (k/h)	60			60	50		
Link Distance (m)	94.7			238.7	204.5		
Travel Time (s)	5.7			14.3	14.7		
Confl. Peds. (#/hr)		6	6		5	5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	1606	169	76	935	126	60	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1606	169	76	935	126	60	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	L NA	R NA	
Median Width(m)	5.0			5.0	3.7		
Link Offset(m)	0.0			0.0	0.0		
Crosswalk Width(m)	9.0			9.0	9.0		
Two way Left Turn Lane							
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	
Turning Speed (k/h)		14	24	_	24	14	
Number of Detectors	- 2	1	1	2	1	1	
Detector Template	l hru	Right	Left	l hru	Left	Right	
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6	
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)	5.5	18.6	18.6	5.5	18.6	18.6	
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	
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)	0/.0 E E			01.D			
Detector 2 Size(III)							
Detector 2 Type	UI+EX			UI+EX			
Detector 2 Channel	0.0			0.0			
	0.0	Dorm	Dorm	0.0	Drot	Dorm	
Protected Phases	NA 2	Perm	reim	NA G	Prot	reim	3
Permitted Phases	2	ŋ	6	U	4	Q	J
Detector Phase	2	2	6	6	1	0 Q	
Switch Phase	2	2	U	0	4	0	
Minimum Initial (a)	10.0	10.0	10.0	10.0	50	10.0	3.0
winning (S)	10.0	10.0	10.0	10.0	5.0	10.0	0.0

	-	\mathbf{r}	1	+	•	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Minimum Split (s)	31.2	31.2	31.2	31.2	11.3	37.3	30.0
Total Split (s)	88.0	88.0	88.0	88.0	12.0	42.0	30.0
Total Split (%)	67.7%	67.7%	67.7%	67.7%	9.2%	32.3%	23%
Maximum Green (s)	81.8	81.8	81.8	81.8	5.7	35.7	28.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	2.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.0	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.3	6.3	
Lead/Lag					Lag		Lead
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0			21.0
Pedestrian Calls (#/hr)	10	10	10	10			10
Act Effct Green (s)	88.3	88.3	88.3	88.3	17.2	29.2	
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.13	0.22	
v/c Ratio	0.70	0.17	0.64	0.41	0.57	0.17	
Control Delay	2.8	0.2	39.2	8.0	64.9	20.8	
Queue Delay	0.2	0.0	0.0	0.0	0.0	0.0	
Total Delay	3.0	0.2	39.2	8.0	64.9	20.8	
LOS	А	А	D	А	E	С	
Approach Delay	2.7			10.4	50.6		
Approach LOS	А			В	D		
Queue Length 50th (m)	9.8	0.2	5.5	24.9	27.4	5.3	
Queue Length 95th (m)	13.6	m0.0	#39.4	40.5	#80.5	14.5	
Internal Link Dist (m)	70.7			214.7	180.5		
Turn Bay Length (m)		50.0	65.0		70.0	70.0	
Base Capacity (vph)	2279	1022	118	2279	222	429	
Starvation Cap Reductn	127	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.75	0.17	0.64	0.41	0.57	0.14	
Intersection Summary	0.41						
Area Type:	Other						
Cycle Length: 130							
Actuated Cycle Length: 130							
Offset: 129 (99%), Referenced	I to phase 2:I	EBT and 6	:WBTL, St	art of Gree	n		
Natural Cycle: 130							
Control Type: Actuated-Coordi	inated						
Maximum v/c Ratio: 0.70							
Intersection Signal Delay: 8.3				In	tersection	LOS: A	
Intersection Capacity Utilizatio	n 78.1%			IC	U Level o	f Service D	
Analysis Period (min) 15							
# 95th percentile volume exc	ceeds capaci	ty, queue r	nay be lon	ger.			
Queue shown is maximum	after two cyc	les.					
m Volume for 95th percentile	e queue is me	etered by u	ipstream s	ignal.			

Splits and Phases: 3: Lamarche & Innes

→Ø2 (R)	A 803	104
88 s	30 s	12.s
🕈 Ø6 (R)	108	
88 s	42 s	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	X	≜1 ⊾		X	≜1 ⊾			4	1		4	
Traffic Volume (vph)	8	1729	131	67	950	8	88	0	56	4	0	10
Future Volume (vph)	8	1729	131	67	950	8	88	0	56	4	0	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0	1000	0.0	40.0	1000	0.0	0.0	1000	0.0	0.0	1000	0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	80 0		Ŭ	30.0		Ŭ	20.0		•	20.0		Ŭ
Lane Litil 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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.99	1.00
Frt		0 989			0 999			1.00	0.850		0.00	
Fit Protected	0.950	0.000		0.950	0.000			0.950	0.000		0.004	
Satd Flow (prot)	1712	33/10	٥	1712	3300	٥	0	1712	1381	0	1587	0
Elt Permitted	0.285	00-0	U	0.088	0022	0	U	0.7/8	1001	U	0 020	U
Sate Flow (parm)	514	3340	٥	150	3300	٥	٥	12/2	1201	٥	1/01	٥
Pight Turn on Red	514	0040	Voc	109	JJZZ	Vec	0	1042	Voc	U	1401	Vos
Sate Flow (PTOP)		1/	163		1	163			30		26	163
Link Spood (k/b)		60			60			40			20	
Link Dietenee (m)		00			202.0			40			40 62.6	
		230.7			292.0			101.9			02.0 E.C	
Confl Dodo (#/br)		14.5	0	0	17.0		2	13.7			5.0	2
Confl. Peas. (#/nr)			2	2			3					3
Confi. Bikes (#/nr)	1 00	1 00	1 00	1.00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
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 venicles (%)	1%	Z%	1%	1%	4%	1%	1%	1%	12%	1%	1%	1%
Adj. Flow (vpn)	8	1729	131	6 <i>1</i>	950	ð	88	0	56	4	0	10
Shared Lane Traffic (%)	0	4000	•	07	050	•	0	00	50	0		0
Lane Group Flow (vpn)	8	1860	0	67	958	0	0	88	50	0	14	0
Enter Blocked Intersection	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		5.0			5.0			0.0			0.0	
		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Iwo way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	1.00
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	0	14	24	0	14	24	•	14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	l hru		Left	l hru		Left	Ihru	Right	Left	Ihru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0	18.6	18.6	93.0	
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)	18.6	5.5		18.6	5.5		18.6	5.5	18.6	18.6	5.5	
Detector 1 Type	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		8	8	8	4	4	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	97.0	97.0		97.0	97.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	74.6%	74.6%		74.6%	74.6%		25.4%	25.4%	25.4%	25.4%	25.4%	
Maximum Green (s)	90.9	90.9		90.9	90.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	2	2		1	1		1	1	1	3	3	
Act Effct Green (s)	102.1	102.1		102.1	102.1			15.5	15.5		15.5	
Actuated g/C Ratio	0.79	0.79		0.79	0.79			0.12	0.12		0.12	
V/C Ratio	0.02	0.71		0.54	0.37			0.55	0.28		0.07	
Control Delay	1.1	2.0		27.3	5.2			65.5	24.1		7.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
	1.1	2.0		21.3	5.2			05.5	24.1		7.4	
LUS Approach Dolov	A	A 2.0		U	A 6.6				U		A 7.4	
Approach LOS		2.0			0.0			49.4			/.4 A	
Quoue Longth 50th (m)	0.1	85		46	27 Q			20.2	37		0.0	
Queue Longth 95th (m)	0.1 m0.2	14.0		4.0 #22.2	54.7			20.2	1/ 1		2.0	
Internal Link Dist (m)	1110.2	21/17		#33.3	268.8			127.0	14.1		2.9	
Turn Bay Length (m)	65.0	214.7		40.0	200.0			127.3			50.0	
Base Capacity (vph)	403	2633		124	2609			275	314		324	
Starvation Can Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.02	0.71		0.54	0.37			0.32	0.18		0.04	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 4 (3%), Referenced to p	phase 2:EBT	L and 6:WI	BTL, Start	of Green								
Natural Cycle: 90												
Control Type: Actuated-Coordin	nated											
Iviaximum v/c Ratio: 0.71					Anna attan I	00. 4						
Intersection Signal Delay: 5.8	n 00 40/			In	Itersection L	OS: A						
Intersection Capacity Utilization	11 00.4%			IC	U Level of	Service E						
Hind (Min) 15	oode concei	ty anone a	any ha land	nor								
π 35th percentile volume exc Oueue shown is maximum :	after two cvc	iy, queue li les		yer.								

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 473 E of Page & Innes

ø₂ (R)	↓ Ø4
97 s	33 s
₩ Ø6 (R)	1ø8
97 s	33 s

	≯	-	-	•	1	1
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	N	**	A 14			1
Traffic Volume (vph)	11	1775	1042	19	0	30
Future Volume (vph)	11	1775	1042	19	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	25.0			0.0	0.0	0.0
Storage Lanes	1			0	0	1
Taper Length (m)	55.0				20.0	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.997			0.865
Flt Protected	0.950					
Satd. Flow (prot)	1712	3357	3348	0	0	1559
Flt Permitted	0.950					
Satd. Flow (perm)	1712	3357	3348	0	0	1559
Link Speed (k/h)		60	60		30	
Link Distance (m)		142.1	94.7		74.6	
Travel Time (s)		8.5	5.7		9.0	
Confl. Peds. (#/hr)	5			5		
Confl. Bikes (#/hr)				1		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	3%	1%	1%	1%
Adj. Flow (vph)	11	1775	1042	19	0	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	1775	1061	0	0	30
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	L NA	Left	Left	R NA	L NA	R NA
Median Width(m)		5.0	5.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		9.0	9.0		9.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	97			97	97	97
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 55.1%			IC	U Level of	Service B
Analysis Period (min) 15						

Lane Cocup EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR Lane Conductions 1 <td< th=""><th></th><th>٦</th><th>-</th><th>\mathbf{r}</th><th>4</th><th>-</th><th>•</th><th>1</th><th>1</th><th>1</th><th>1</th><th>Ŧ</th><th>~</th></td<>		٦	-	\mathbf{r}	4	-	•	1	1	1	1	Ŧ	~
Lane Configurations Yr A Y A Y A Y A Y A Y A Y A Y A Y A Y Y Y A Y Y	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	Lane Configurations	ካካ	**	1	N	**	1	X	**	1	5	**	1
Future Volume (right) 131 532 25 29 160 1200 1800	Traffic Volume (vph)	131	532	25	29	1604	219	219	280	58	98	108	496
Jeas Flow (vphp) 1800	Future Volume (vph)	131	532	25	29	1604	219	219	280	58	98	108	496
Storage Length (m) 1400 80.0 1050 60.0 50.0 55.0 66.0 Storage Length (m) 40.0 1	Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Lanes 2 1 <	Storage Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Tape Length (m) 400 400 100 995 100 100 0.95 100 100 0.95 100 100 0.95 100 100 0.95 100 100 0.95 100 100 0.95 100 100 0.95 100 100 0.95 100 100 0.95 100 100 0.95 0.950 0.850 0	Storage Lanes	2		1	1		1	1		1	1		1
Insert UII Factor 0.97 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00 0.95 0.99 0.99 0.99 0.99 0.950 <	Taper Length (m)	40.0		•	40.0		•	10.0		·	20.0		
Pad Bike Factor 1.00 0.06 0.96 0.97 0.99 0.94 0.97 0.98 FIT 0.850 0.9	Lane Util, Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fri Inc 0.850 0.050 0.950 0.950 0.950 0.950 0.950 FI Protected 0.950 0.950 0.950 0.950 0.950 0.950 0.950 FI Permitted 0.950 0.950 0.951 0.950 0.950 0.950 Statl. Flow (perm) 2985 3144 1413 1572 3357 1512 Statl. Flow (perm) 2989 3144 1413 143 922 3357 1500 Right Turn on Red Yes 143 143 82 133 Link Distance (m) 264.5 491.4 387.7 301.9 Travel Time (s) 100 1.00 <t< td=""><td>Ped Bike Factor</td><td>1.00</td><td>0.00</td><td>0.96</td><td>0.99</td><td>0.00</td><td>0.97</td><td>0.99</td><td>0.00</td><td>0.94</td><td>0.97</td><td>0.00</td><td>0.98</td></t<>	Ped Bike Factor	1.00	0.00	0.96	0.99	0.00	0.97	0.99	0.00	0.94	0.97	0.00	0.98
Fit Protected 0.950 0.950 0.950 0.950 0.950 0.950 Satu Flow (prot) 2995 3144 1473 1572 3357 1502 1712 3357 1502 1679 3357 1532 Satu Flow (perm) 2989 3144 1416 1551 3357 1403 975 3357 1413 992 3357 1502 1532 Satu Flow (perm) 2989 3144 1416 1551 357 1403 975 3357 1413 992 3357 1502 Satu Flow (RTOR) 143 143 143 82 138 138 144 3877 3019 137 1301 130 130 130 130 100	Frt	1.00		0.850	0.00		0.850	0.00		0.850	0.01		0.850
Satil Flow (port) 2995 3144 1473 1572 3357 1502 1712 3357 1502 1679 3357 1532 FI Permitted 0.930 0.940 0.545 0.580 0.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50	Flt Protected	0.950			0.950			0.950		0.000	0.950		0.000
Premitted 0.950 0.050 0.050 0.050 0.545 0.580 0.050 0.580 Satd, Flow (perm) 2899 3144 1416 1551 3357 1413 992 3357 1500 Satd, Flow (ptrOR) 143 143 82 138 Link Speed (k/h) 60 60 50 50 50 Confl. Feds, (#hr) 6 15.9 29.5 2.7.9 21.7 Confl. Feds, (#hr) 6 7 Confl. Feds, (#hr) 6 144 4 6 6 32.32 6 6 Peak Hour Factor 1.00 <	Satd Flow (prot)	2995	3144	1473	1572	3357	1502	1712	3357	1502	1679	3357	1532
Stat: Discovery 2889 3144 1416 1551 3357 1463 975 3357 1413 992 3357 1500 Right Turn on Red Yes Yes <t< td=""><td>Elt Permitted</td><td>0.950</td><td>••••</td><td>1110</td><td>0.950</td><td>0001</td><td>1002</td><td>0.545</td><td>0001</td><td>1002</td><td>0.580</td><td>0001</td><td>1002</td></t<>	Elt Permitted	0.950	••••	1110	0.950	0001	1002	0.545	0001	1002	0.580	0001	1002
Right Turn on Red Yes	Satd Flow (perm)	2989	3144	1416	1551	3357	1463	975	3357	1413	992	3357	1500
Satil: Flow (RTOR) 143 143 143 62 138 Link Distance (m) 264.5 491.4 387.7 301.9 Travel Time (s) 15.9 29.5 27.9 21.7 Confl. Peds (#hr) 6 14 14 6 6 32 32 6 Confl. Reds (#hr) 6 1.00	Right Turn on Red	2000	0111	Yes	1001	0001	Yes	010	0001	Yes	002	0001	Yes
Date Speed (kh) 60 60 50 50 50 Link Speed (kh) 264.5 491.4 387.7 3019 3019 Travel Time (s) 15.9 29.5 27.9 21.7 Confl. Bikes (#hr) 6 6 32 32 6 Confl. Bikes (#hr) 6 14 14 6 6 32 32 6 Deak Hour Factor 1.00	Satd Flow (RTOR)			143			143			82			138
Link Distance (m) 264.5 491.4 387.7 301.9 Travel Time (s) 15.9 29.5 27.9 21.7 Confl. Peds, (Whr) 6 14 14 6 6 Confl. Peds, (Whr) 100 1.00	Link Speed (k/h)		60	110		60			50	02		50	100
Link Diduction Long Holm Both	Link Distance (m)		264 5			491.4			387.7			301.9	
Induction Industry	Travel Time (s)		15.9			29.5			27.9			21.7	
Onth. Bikes (#hr) O IA IA IA O	Confl Peds (#/br)	6	10.5	14	14	20.0	6	6	21.5	32	32	21.7	6
Online winds One of the sector 1.00	Confl Bikes (#/hr)	0		17	17		6	U		02	02		U
Ibbs Ibbs <th< td=""><td>Peak Hour Factor</td><td>1 00</td><td>1 00</td></th<>	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
Inder younds (x) 12.0 10.0 0.0	Heavy Vehicles (%)	12%	1.00	5%	1.00	3%	3%	1.00	3%	3%	3%	3%	1%
Indiana	Adi Flow (vph)	12/0	532	25	20	160/	210	210	280	58	9/0	108	/196
Detector Ends (vir) 131 532 25 29 1604 219 280 58 98 108 496 Enter Blocked Intersection No	Shared Lane Traffic (%)	101	002	20	25	100-	215	215	200	50	50	100	-50
Date of Dig Num Dia Dia <thdia< th=""> <thdia< th=""> <</thdia<></thdia<>	Lane Group Flow (vph)	131	532	25	29	1604	219	219	280	58	98	108	496
Line Alignment LNA Left RNA LNA <td>Enter Blocked Intersection</td> <td>No</td>	Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Land under finite Link Link <thlink< th=""> Link Link<td>Lane Alignment</td><td>I NA</td><td>Left</td><td>RNA</td><td>I NA</td><td>Left</td><td>RNA</td><td>I NA</td><td>Left</td><td>RNA</td><td>I NA</td><td>Left</td><td>RNA</td></thlink<>	Lane Alignment	I NA	Left	RNA	I NA	Left	RNA	I NA	Left	RNA	I NA	Left	RNA
Indext Nation O.0 O.0 O.0 O.0 O.0 Crosswalk Width(m) 5.0 5.0 5.0 5.0 5.0 Two way Left Turn Lane	Median Width(m)		9.0	11101		74	11101		6.0	11101		6.0	11111
Initial Construction Disc Disc <thdisc< th=""> Disc Disc<!--</td--><td>Link Offset(m)</td><td></td><td>0.0</td><td></td><td></td><td>0.0</td><td></td><td></td><td>0.0</td><td></td><td></td><td>0.0</td><td></td></thdisc<>	Link Offset(m)		0.0			0.0			0.0			0.0	
Detector 1 Disc Dis Disc Disc	Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Headway Factor 1.06	Two way Left Turn Lane		0.0			0.0			0.0			0.0	
Index Index <th< td=""><td>Headway Eactor</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td></th<>	Headway Eactor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Number of Detectors 1 2 1 1 1 2	Turning Speed (k/h)	24	1.00	14	24	1.00	14	24	1.00	14	24	1.00	14
Indicator of template Left Thru Right Left Thru <	Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector (m) 18.6 93.0 18.6 18.6 93.0 18.6 18.6 93.0 18.6 18.6 93.0 18.6 18.6 93.0 18.6 18.6 93.0 18.6	Detector Template	Left	Thru	Right	Left	Thru	Right	l eft	Thru	Right	Left	Thru	Right
Detector (m) 0.0 <t< td=""><td>Leading Detector (m)</td><td>18.6</td><td>93.0</td><td>18.6</td><td>18.6</td><td>93.0</td><td>18.6</td><td>18.6</td><td>93.0</td><td>18.6</td><td>18.6</td><td>93.0</td><td>18.6</td></t<>	Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Intering Decision (in) 0.0 0	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 Disc	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 Type CI+Ex	Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Channel 0.1 EX 0.0	Detector 1 Type	CI+Ex	CI+Fx	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Fx	CI+Fx	CI+Ex	CI+Ex
Detector 1 Extend (s) 0.0	Detector 1 Channel	0/	e . _ /	0 . 1 .	0 . – <i>n</i>	0 . – <i>n</i>	0 . – <i>n</i>	e . _ /	0. 2.0	0/	0 . – <i>n</i>	0 . 1 .	01 2/1
Detector 1 Queue (s) 0.0	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 Delay (s) 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 2 Position(m) 87.5 87.5 87.5 87.5 Detector 2 Size(m) 5.5 5.5 5.5 5.5 Detector 2 Size(m) Cl+Ex Cl+Ex <th< td=""><td>Detector 1 Delay (s)</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td></th<>	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 Size(m)5.55.55.55.5Detector 2 TypeCI+ExCI+ExCI+ExCI+ExDetector 2 ChannelDetector 2 Extend (s)0.00.00.00.0Detector 2 Extend (s)0.00.00.00.00.0Turn TypeProtNAPermProtNAPermProtected Phases5216384Permitted Phases268844Detector Phase5221663844	Detector 2 Position(m)	0.0	87.5	010	010	87.5	010	0.0	87.5	0.0	010	87.5	0.0
Detector 2 TypeCl+ExCl+ExCl+ExCl+ExDetector 2 ChannelDetector 2 Extend (s)0.00.00.00.0Turn TypeProtNAPermProtNAProtected Phases5216384Permitted Phases268844Detector Phase521663844	Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Channel Or EX Or EX Or EX Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Turn Type Prot NA Perm Prot NA Protected Phases 5 2 1 6 3 8 4 Permitted Phases 2 6 8 8 4 4 Detector Phase 5 2 1 6 6 3 8 4 4	Detector 2 Type		CI+Fx			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Extend (s) 0.0 0.0 0.0 0.0 0.0 Turn Type Prot NA Perm Prot NA Perm pm+pt NA Perm NA Perm Protected Phases 5 2 1 6 3 8 4 4 Permitted Phases 2 2 1 6 6 3 8 4 4	Detector 2 Channel												
Turn Type Prot NA Perm Prot NA Perm pm+pt NA Perm Perm NA Perm Protected Phases 5 2 1 6 3 8 4 4 Permitted Phases 2 6 8 8 4 4 Detector Phase 5 2 1 6 6 3 8 4 4	Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Protected Phases 5 2 1 6 3 8 4 Permitted Phases 2 6 8 4 4 Detector Phase 5 2 1 6 3 8 4 4		Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Permitted Phases 2 6 8 4 4 Detector Phase 5 2 1 6 3 8 4 4	Protected Phases	5	2		1	6		3	8	1 0111	1 0111	4	i ciili
Detector Phase 5 2 2 1 6 6 3 8 8 4 4 4	Permitted Phases	5	2	2			6	8	0	8	4	т	4
	Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4

J.Audia, Novatech

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	50	10.0	10.0	5.0	10.0	10.0	50	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Split (s)	13.0	72.0	72.0	13.0	72.0	72.0	12.0	45.0	45.0	33.0	33.0	33.0
Total Split (%)	10.0%	55.4%	55.4%	10.0%	55.4%	55.4%	9.2%	34.6%	34.6%	25.4%	25.4%	25.4%
Maximum Green (s)	6.4	65.8	65.8	6.8	65.8	65.8	5.3	38.3	38.3	26.3	26.3	26.3
Yellow Time (s)	3.7	37	37	3.7	37	37	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	29	2.5	2.5	2.5	2.5	2.5	3.4	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	0.1	0.0	0.0
Total Lost Time (s)	6.6	6.2	6.0	6.2	6.0	6.2	6.7	6.7	6.7	67	6.7	6.7
	l ead	Lag	Lan	Lead	L ag	Lan	Lead	0.1	0.1	Lan	l an	Lan
Lead-Lag Optimize?	Loud	Lag	Lag	Loud	Lag	Lag	Loud			Lag	Lag	Lag
Vehicle Extension (s)	3.0	3.0	30	3.0	30	30	3.0	30	30	30	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)	Nono	7.0	7.0	Nono	7.0	7.0	Nono	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		14	14		6	6		32	32	6	6	6
Act Effct Green (s)	6.4	71.0	71.0	6.5	65.8	65.8	38.3	38.3	38.3	26.3	26.3	26.3
Actuated g/C Ratio	0.05	0.55	0.55	0.05	0.51	0.51	0.29	0.29	0.29	0.20	0.20	0.20
v/c Ratio	0.89	0.31	0.03	0.37	0.94	0.27	0.69	0.28	0.12	0.49	0.16	1.20
Control Delay	110.9	17.6	0.1	73.2	42.9	7.3	51.9	36.2	3.6	55.4	43.5	143.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.9	17.6	0.1	73.2	42.9	7.3	51.9	36.2	3.6	55.4	43.5	143.8
LOS	F	В	A	E	D	A	D	D	A	E	D	F
Approach Delay	•	34.7		_	39.1		_	39.0		_	116.0	•
Approach LOS		С			D			D			F	
Queue Length 50th (m)	16.1	38.1	0.0	6.7	183.1	9.1	41.8	26.7	0.0	20.6	11.1	~114.6
Queue Length 95th (m)	#33.6	49.6	0.0	16.2	#233.8	22.2	63.6	37.9	5.1	37.9	18.7	#176.3
Internal Link Dist (m)		240.5			467.4			363.7			277.9	
Turn Bay Length (m)	140.0		80.0	105.0		60.0	50.0		50.0	55.0		60.0
Base Capacity (vph)	147	1717	838	82	1699	811	317	989	474	200	679	413
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.31	0.03	0.35	0.94	0.27	0.69	0.28	0.12	0.49	0.16	1.20
Intersection Summary												
Area Type: C	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%). Referenced to ph	ase 2:EBT	and 6:WE	T. Start of	Green								
Natural Cycle: 145			,									
Control Type: Actuated-Coordina	ated											
Maximum v/c Ratio: 1.20												
Intersection Signal Delay: 52.5				In	tersection	LOS: D						
Intersection Capacity Utilization	109.0%			IC	U Level of	f Service G						
Analysis Period (min) 15												
~ Volume exceeds capacity, gi	ueue is the	oretically i	nfinite.									
Queue shown is maximum af	ter two cyc	les.										
# 95th percentile volume excee	eds capaci	ty, queue r	nay be lon	ger.								
Queue shown is maximum af	ter two cyc	les.		-								
Splits and Phases: 1: Orleans	& Innes											



2: Page & Innes AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	5	≜1 ⊾			N	≜1 ⊾			4			4
Traffic Volume (vph)	12	616	21	3	37	1651	20	14	12	38	34	9
Future Volume (vph)	12	616	21	3	37	1651	20	14	12	38	34	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0		45.0		0.0	0.0		0.0	0.0	
Storage Lanes	1		0		1		0	0		0	0	
Taper Length (m)	35.0				55.0			2.5			2.5	
Lane Util, Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00	1.00			0.99			0.99
Frt		0.995				0.998			0.920			0.932
Flt Protected	0.950				0.950				0.989			0.981
Satd, Flow (prot)	1586	3129	0	0	1515	3349	0	0	1568	0	0	1596
Flt Permitted	0.107	0.20	· ·	•	0.405		•		0.922	· ·	· ·	0.851
Satd, Flow (perm)	179	3129	0	0	643	3349	0	0	1458	0	0	1384
Right Turn on Red		0120	Yes	Ŭ	010	0010	Yes	Ŭ	1100	Yes	v	1001
Satd, Flow (RTOR)		5				2			38			31
Link Speed (k/h)		60				60			40			40
Link Distance (m)		491.4				142 1			212.5			273.4
Travel Time (s)		29.5				8.5			19.1			24.6
Confl Peds (#/hr)	4	20.0	7		7	0.0	4	11	10.1			21.0
Confl Bikes (#/hr)			1							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 (%)	9%	1.00	5%	3%	1.00	3%	5%	1%	15%	3%	1%	1.00
Adi Flow (vph)	12	616	21	3	37	1651	20	1/	12	38	3/1	1070 Q
Shared Lane Traffic (%)	12	010	21	5	51	1001	20	17	12	50	54	5
Lane Group Flow (vph)	12	637	0	0	40	1671	0	0	64	0	0	86
Enter Blocked Intersection	No	No	No	No	No	Ves	No	No	No	No	No	No
Lane Alignment	l off	Loft	Right	R NA	l off	l off	Right		Loft	RNA		Left
Median Width(m)	Len	5.0	Tagin		Leit	5.0	Tugin		0.0			0.0
Link Offset(m)		0.0				0.0			0.0			0.0
Crosswalk Width(m)		10.0				10.0			5.0			5.0
		10.0				10.0			0.0			0.0
Headway Eactor	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)	2/	1.00	1.00	1.00	2/	1.00	1.00	2/	1.00	1.00	2/	1.00
Number of Detectors	1	2	17	1	2 4 1	2	17	2 4 1	2	17	1	2
Detector Template	ا م	Thru		ا taft	ا م	Thru		ا ft	Thru		ا ما	Thru
Leading Detector (m)	18.6	93.0		18.6	18.6	93.0		18.6	93.0		18.6	93.0
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)	18.6	5.5		18.6	18.6	5.5		18.6	5.5		18.6	5.5
Detector 1 Type	CI+Ex	CI+Ex		Cl+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex
Detector 1 Channel					OFEX						OFEX	ONLX
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)	0.0	87.5		0.0	0.0	87.5		0.0	87.5		0.0	87.5
Detector 2 Size(m)		5.5				5.5			5.5			5.5
Detector 2 Type		CI+Ev				CI+Ev			CI+Ev			CI+Ev
Detector 2 Channel		OFLA				OFLA			OFEX			
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
	Porm	NIA		Perm	Perm	NIA		Perm			Perm	0.0
Protected Phases	1.GIIII	2			i eiiii	AVI A		i eiiii	۱۱۸/۹۸ Q		i eiiii	11/4
Permitted Phases	0	2		6	6	0		Q	0		Λ	4
Detector Phase	2	2		6	6	6		Q	Q		4	1
Detector mase	2	2		0	0	0		0	0		4	4

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Lane Group	SBR	
LaneConfigurations		
Traffic Volume (vph)	43	
Future Volume (vph)	43	
Ideal Flow (vphpl)	1800	
Storage Length (m)	0.0	
Storage Lanes	0	
Taper Length (m)		
Lane Util. Factor	1.00	
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)	0	
Flt Permitted		
Satd. Flow (perm)	0	
Right Turn on Red	Yes	
Satd. Flow (RTOR)		
Link Speed (k/h)		
Link Distance (m)		
Travel Time (s)		
Confl. Peds. (#/hr)	11	
Confl. Bikes (#/hr)	1	
Peak Hour Factor	1.00	
Heavy Vehicles (%)	3%	
Adj. Flow (vph)	43	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	
Enter Blocked Intersection	No	
Lane Alignment	R NA	
Median Width(m)		
Link Offset(m)		
Crosswalk Width(m)		
Two way Left Turn Lane		
Headway Factor	1.06	
Turning Speed (k/h)	14	
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)		
Turn Type		
Protected Phases		
Permitted Phases		
Detector Phase		

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2: Page & Innes AM Peak Hour

	٦	-	$\mathbf{\hat{z}}$	F	•	+	*	1	1	1	1	ţ
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0		10.0	10.0		10.0	10.0
Minimum Split (s)	39.2	39.2		39.2	39.2	39.2		37.8	37.8		37.8	37.8
Total Split (s)	82.0	82.0		82.0	82.0	82.0		38.0	38.0		38.0	38.0
Total Split (%)	68.3%	68.3%		68.3%	68.3%	68.3%		31.7%	31.7%		31.7%	31.7%
Maximum Green (s)	75.8	75.8		75.8	75.8	75.8		31.2	31.2		31.2	31.2
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.0	3.0		3.0	3.0
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5		3.8	3.8		3.8	3.8
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0			0.0
Total Lost Time (s)	6.2	6.2			6.2	6.2			6.8			6.8
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
	C-Max	C-Max		C-Max	C-Max	C-Max		None	None		None	None
Walk Time (s)	15.0	15.0		15.0	15.0	15.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	18.0	18.0		18.0	18.0	18.0		24.0	24.0		24.0	24.0
Pedestrian Calls (#/nr)	1	1		4	4	4		1	10.4		TI	10.4
Act Effect Green (S)	0.0	0.0			0.00	0.0			10.4			10.4
Actuated g/C Ratio	0.74	0.74			0.74	0.74			0.15			0.15
V/C Rallo	0.09	0.20			0.00	0.00			0.20			21.1
Ouque Delay	9.7	0.7			2.2	0.0			21.2			0.0
Total Delay	0.0	6.7			2.0	0.0			21.2			21.1
	Δ	0.7			Δ	Δ			21.2			51.1 C
Approach Delay	7	68			Л	37			21.2			31.1
Approach LOS		0.0 A				Δ			C			C
Queue Length 50th (m)	0.4	13.7			0.8	33.2			54			11.6
Queue Length 95th (m)	3.7	39.9			m0.7	12.9			14.4			21.8
Internal Link Dist (m)	0.1	467.4				118.1			188.5			249.4
Turn Bay Length (m)	100.0				45.0							
Base Capacity (vph)	132	2311			474	2473			407			382
Starvation Cap Reductn	0	0			0	5			0			0
Spillback Cap Reductn	0	0			0	0			0			0
Storage Cap Reductn	0	0			0	0			0			0
Reduced v/c Ratio	0.09	0.28			0.08	0.68			0.16			0.23
Intersection Summary												
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 22 (18%), Referenced	to phase 2:E	BIL and 6:	WBTL, St	art of Gree	n							
Natural Cycle: 90	المعلم ما											
Control Type: Actuated-Coor	unated											
Interpretion Signal Delay 5 (\			1	torootio							
Intersection Signal Delay: 5.9	1 ion 71 10/			In		LUS: A						
Analysis Daried (min) 45	1011 / 4.4%			IC	O Level 0	I Service D						
Analysis Period (min) 15												

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Page & Innes



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Lane Group	SBR
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

	-	\mathbf{r}	1	+	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3
Lane Configurations	**	1	X	**	× 1	1	
Traffic Volume (vph)	542	176	179	1361	291	171	
Future Volume (vph)	542	176	179	1361	291	171	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)	1000	50.0	65.0	1000	70.0	70.0	
Storage Lanes		1	1		1	0	
Taper Length (m)		•	80 0		20.0	v	
Lane Util Factor	0.95	1 00	1 00	0.95	1 00	1 00	
Ped Bike Factor	0.00	0.95	0.99	0.00	0.98	0.98	
Frt		0.850	0.00		0.00	0.850	
Elt Protected		0.000	0 950		0 950	0.000	
Satd Flow (prot)	3357	1502	1679	3357	1679	1502	
Elt Permitted	0001	1002	0 424	0001	0.950	1002	
Satd Flow (perm)	3357	1433	741	3357	1650	1477	
Right Turn on Red	0001	Yes	, , , ,	0001	1000	Yes	
Satd Flow (RTOR)		176				171	
Link Speed (k/h)	60	170		60	50	17.1	
Link Distance (m)	94.7			238.7	204 5		
Travel Time (s)	57			1/1 3	204.0		
Confl Peds (#/br)	5.1	11	11	14.5	5	5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1 00	1 00	
Adi Flow (vph)	5/12	176	170	1361	201	1.00	
Shared Lane Traffic (%)	572	170	175	1001	231	17.1	
Lane Group Flow (vph)	5/2	176	170	1361	201	171	
Enter Blocked Intersection	Vas	No	No	No	No	No	
Lane Alignment	l off	Right	Loft	Loft		RNA	
Median Width(m)	5.0	Tugitt	Leit	5.0	37	N INA	
Link Offset(m)	0.0			0.0	0.0		
Crosswalk Width(m)	0.0 Q ()			0.0 Q ()	0.0 Q ()		
	5.0			5.0	5.0		
Headway Eactor	1.06	1.06	1.06	1.06	1.06	1.06	
Turning Speed (k/b)	1.00	1.00	2/	1.00	2/	1.00	
Number of Detectors	2	1		2		1	
Detector Template	Thru	Right	ا ftم ا	Thru	ا م	Right	
Leading Detector (m)	93.0	18.6	18.6	03.0	18.6	18.6	
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)	5.5	18.6	18.6	5.5	18.6	18.6	
Detector 1 Type	CI+Ev	CI+Ev	CI+Ev	CI+Ev	CI+Ev	CI+Ev	
Detector 1 Channel	OILX	OFLX		OFLA	OFLX	OILX	
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)	87.5	0.0	0.0	87.5	0.0	0.0	
Detector 2 Size(m)	5.5			5.5			
Detector 2 Type	CI+Ev			CI+Ev			
Detector 2 Channel	OFEX						
Detector 2 Extend (s)	0.0			0.0			
	0.0 NA	Dorm	Dorm	0.0 NA	Prot	Dorm	
Protected Phases	2			6	1		3
Permitted Phases	2	2	6	0	4	Q	0
Detector Phases	2	2	6	6	1	Q	
Switch Phase	2	2	0	0	4	0	
Minimum Initial (c)	10.0	10.0	10.0	10.0	50	10.0	3.0
winimum miliar (S)	10.0	10.0	10.0	10.0	5.0	10.0	0.0

	→	\mathbf{r}	1	-	1	1			
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3		
Minimum Split (s)	31.2	31.2	31.2	31.2	11.3	16.3	30.0		
Total Split (s)	73.0	73.0	73.0	73.0	17.0	47.0	30.0		
Total Split (%)	60.8%	60.8%	60.8%	60.8%	14.2%	39.2%	25%		
Maximum Green (s)	66.8	66.8	66.8	66.8	10.7	40.7	28.0		
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	2.0		
All-Red Time (s)	2.5	2.5	2.5	2.5	3.0	3.0	0.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.3	6.3			
Lead/Lag					Lag		Lead		
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None		
Walk Time (s)	7.0	7.0	7.0	7.0			7.0		
Flash Dont Walk (s)	18.0	18.0	18.0	18.0			21.0		
Pedestrian Calls (#/hr)	10	10	10	10			10		
Act Effct Green (s)	67.8	67.8	67.8	67.8	27.7	39.7			
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.23	0.33			
v/c Ratio	0.29	0.20	0.43	0.72	0.75	0.28			
Control Delay	10.6	1.3	13.1	17.1	58.2	5.4			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	10.6	1.3	13.1	17.1	58.2	5.4			
LOS	В	А	В	В	E	А			
Approach Delay	8.3			16.6	38.7				
Approach LOS	А			В	D				
Queue Length 50th (m)	30.2	0.0	20.6	105.7	53.6	0.0			
Queue Length 95th (m)	21.4	2.2	22.4	116.8	#147.2	13.5			
Internal Link Dist (m)	70.7			214.7	180.5				
Turn Bay Length (m)		50.0	65.0		70.0	70.0			
Base Capacity (vph)	1896	886	418	1896	387	613			
Starvation Cap Reductn	0	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0	0			
Reduced v/c Ratio	0.29	0.20	0.43	0.72	0.75	0.28			
Intersection Summary									
Area Type:	Other								
Cycle Length: 120									
Actuated Cycle Length: 120	4								
Natural Cycle: 100	to phase 2:E	BI and 6:1	IVBIL, Sta	rt of Greer	1				
Control Type: Actuated-Coord	dinated								
Maximum v/c Ratio: 0.75									
Intersection Signal Delay: 18.	2			In	tersection	LOS: B			
Intersection Capacity Utilization	on 67.1%			IC	CU Level o	f Service C			
Analysis Period (min) 15									
# 95th percentile volume ex	ceeds capaci	ty, queue i	nay be lon	ger.					
Queue shown is maximum	n after two cyc	les.							
Splits and Phases: 3: Lama	arche & Innes								
■ ■ Ø2 (R)								▲.	<u>3</u> 4
73 s							30 s	17 s	
+							<i></i>		
🔻 Ø6 (R)							r'Ø8		

47 s

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73 s

4: 473 E of Page & Innes AM Peak Hour

Lane Group EBL EBT EBR WBL WBT WBR NBT NBT SBL SBT SBT Lane Conductions 1 1 1 1 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 1 0 3 3 1 0 3 3 1 0 3 3 1 0 1 0		٦	-	\mathbf{i}	4	←	•	1	1	1	1	Ļ	~
Lane Configurations Y 4D Y AD <	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph) 6 602 38 12 1539 4 99 0 39 1 00 3 Ideal Finue Volume (vph) 6 602 38 12 1539 4 99 0 39 1 0 3 Ideal Finue Volume (vph) 650 0.0 1800	Lane Configurations	X	≜1 ⊾		×	A 12			4	1		4	
Flute Volume (wph) 6 602 38 12 1538 4 99 0 33 1 0 3 Storage Length (m) 65.0 0.0 40.0 1800 18	Traffic Volume (vph)	6	602	38	12	1539	4	99	0	39	1	0	3
isea Filter 1800 <	Future Volume (vph)	6	602	38	12	1539	4	99	0	39	1	0	3
Storage Length (m) 650 0.0 1.00	Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Lanes 1 0 1 0 0 1 0 0 Taper Length (m) 80.0 30.0 20.0 20.0 20.0 Taper Length (m) 80.0 95 0.95 1.00 <t< td=""><td>Storage Length (m)</td><td>65.0</td><td></td><td>0.0</td><td>40.0</td><td></td><td>0.0</td><td>0.0</td><td></td><td>0.0</td><td>0.0</td><td></td><td>0.0</td></t<>	Storage Length (m)	65.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Tape Length (m) 80.0 30.0 20.0 20.0 Lane Uki, Factor 1.00 0.95 0.95 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.99 0.99 Prid Porticed 0.950 0.950 0.950 0.950 0.980 0.899 Satid, Flow (prot) 1712 3115 0 1712 3337 0 0 1357 110 1599 0.938 Satid, Flow (prot) 12 Yes <	Storage Lanes	1		0	1		0	0		1	0		0
Line ULF actor 1.00 0.95 0.95 1.00	Taper Length (m)	80.0		-	30.0		-	20.0		-	20.0		-
Ped Bike Factor Inc.	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
pit 0.991 No 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.950 0.988 FIt Protected 0.135 0.407 0.755 0.942 0.950 0.942 Satcl Flow (prot) 1712 3115 0 733 3357 0 0 1357 1511 0 109 0 Right Turn on Red Yes	Ped Bike Factor		0.00	0.00		1.00	0.00		1.00	0.99		0.99	
Pit Protected 0.950 0.950 0.980 0.980 0.988 Satd, Flow (prot) 1712 3115 0 1712 3357 0 0 1712 1532 0 1583 0 Satd, Flow (prot) 243 3115 0 733 3357 0 0 1575 0.942 Satd, Flow (prot) 243 3115 0 733 3357 0 0 1357 1511 0 1509 0 Satd, Flow (prot) 12 Yes Yes Yes Yes Yes Yes Yes Satd 1519 62.6 6 Confl. Peds, (#hr) 7 2 1 1 2 2 6.6 6 7 2 1 1 2 2 2 1 1.0 1.0 1.0 1.0 1.0<	Frt		0.991							0.850		0.899	
Said Flow (prot) 1712 3115 0 1712 3357 0 0 1712 1532 0 1583 0 FI Permitted 0.135 0.407 0.755 0.942 0 0.942 Said Flow (perm) 243 3115 0 7733 3357 0 0 1357 1511 0 1509 0 Righ Turn on Red Yes Yes <td>Elt Protected</td> <td>0.950</td> <td></td> <td></td> <td>0.950</td> <td></td> <td></td> <td></td> <td>0.950</td> <td></td> <td></td> <td>0.988</td> <td></td>	Elt Protected	0.950			0.950				0.950			0.988	
Fit Permittadio 0.135 0.407 0.407 0.755 0.0342 Satd. Flow (perm) 243 3115 0 733 3357 0 0 1557 1511 0 1509 0 Satd. Flow (ptrOR) 12	Satd, Flow (prot)	1712	3115	0	1712	3357	0	0	1712	1532	0	1583	0
Satzl. Flow (perm) 243 3115 0 773 3357 0 0 157 1511 0 1509 0 Right Tum on Red Yes	Elt Permitted	0 135	0110	Ŭ	0 407	0001	Ŭ	Ŭ	0 755	1002	•	0.942	U
Right Tum on Red Yes	Satd Flow (perm)	243	3115	0	733	3357	0	0	1357	1511	0	1509	0
Satt. Flow (RTOR) 12 10 39 28 Link Speed (kh) 60 60 40 40 Link Distance (m) 238.7 292.8 151.9 62.6 Travel Time (s) 14.3 17.6 13.7 5.6 Confl. Peds. (#hr) 7 7 2 1 1 2 Confl. Sikes (#hr) 7 7 2 1 1 2 Confl. Sikes (#hr) 7 7 2 1 1 2 Deavy Vehicles (%) 1% 10% 10% 1%	Right Turn on Red	210	0110	Yes	100	0001	Yes	Ŭ	1001	Yes	•	1000	Yes
Date Section (M) Col	Satd Flow (RTOR)		12	100			100			39		28	100
Link Distance (m) 238.7 292.8 151.9 62.6 Travel Time (s) 14.3 17.6 13.7 5.6 Confl. Peds, (#hr) 7 2 1 1 2 Confl. Reds, (#hr) 7 2 1 1 2 Confl. Reds, (#hr) 7 2 1 1 2 Peak Hour Factor 1.00 1	Link Speed (k/h)		60			60			40	00		40	
Initiation (in) Isola	Link Distance (m)		238.7			292.8			151.9			62.6	
Confil. Peck (#hr) 7 7 2 1 1 2 Confil. Reds (#hr) 7 2 1 1 2 1 1 2 Deak Hour Factor 1.00 1.06 1.06 <td>Travel Time (s)</td> <td></td> <td>14.3</td> <td></td> <td></td> <td>17.6</td> <td></td> <td></td> <td>13.7</td> <td></td> <td></td> <td>5.6</td> <td></td>	Travel Time (s)		14.3			17.6			13.7			5.6	
Dome Dome I </td <td>Confl Peds (#/hr)</td> <td>7</td> <td>14.0</td> <td></td> <td></td> <td>17.0</td> <td>7</td> <td>2</td> <td>10.7</td> <td>1</td> <td>1</td> <td>0.0</td> <td>2</td>	Confl Peds (#/hr)	7	14.0			17.0	7	2	10.7	1	1	0.0	2
Community (Internet) 1.00<	Confl Bikes (#/hr)	1					1	2					2
Index Too Too </td <td>Peak Hour Factor</td> <td>1 00</td> <td>1 00</td> <td>1.00</td> <td>1 00</td> <td>1.00</td> <td>1 00</td>	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
Index Younds X(i) 1 no 1 no <th1 no<="" th=""> 1 no 1 no</th1>	Heavy Vehicles (%)	1%	1.00	1.00	1%	3%	1%	1%	1%	1%	1%	1%	1%
Individual (p) Image of the stress of th	Adi Flow (vph)	6	602	38	12	1530	170	90	1 /0	20	1/0	0	170
Oncode States Oncode States Output S	Shared Lane Traffic (%)	0	002	50	12	1000	7	55	U	00	I	0	5
Date of our priving Do Do No No <td>Lane Group Flow (vph)</td> <td>6</td> <td>640</td> <td>0</td> <td>12</td> <td>1543</td> <td>0</td> <td>0</td> <td>99</td> <td>39</td> <td>0</td> <td>4</td> <td>0</td>	Lane Group Flow (vph)	6	640	0	12	1543	0	0	99	39	0	4	0
Link block in the structure He NA Left RNA LNA	Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Late rule Link	Lane Alignment		Left	RNA		Left	RNA		Left	RNA		Left	R NA
Inclusion Violation 0.0 0.0 0.0 0.0 0.0 Crosswalk Width(m) 9.0 9.0 9.0 9.0 9.0 Two way Left Turn Lane	Median Width(m)		5.0	1110/1		5.0	1111/1		0.0	1110/1		0.0	1110/
Link Ontool (11) 0.0 0.0 0.0 0.0 0.0 0.0 Crosswalk With(m) 9.0 9.0 9.0 9.0 9.0 9.0 Two way Left Turn Lane	Link Offset(m)		0.0			0.0			0.0			0.0	
Detector I function 0.0 0.0 0.0 0.0 0.0 0.0 Headway Factor 1.06<	Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Headway Factor 1.06	Two way Left Turn Lane		0.0			0.0			0.0			0.0	
Index Index <th< td=""><td>Headway Eactor</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td><td>1.06</td></th<>	Headway Eactor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Harming op Detectors 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1	Turning Speed (k/h)	24	1.00	14	24	1.00	1.00	24	1.00	14	24	1.00	1.00
Normot of Detector Template Left Thru Left Thru Left Thru Right Left Thru Leading Detector (m) 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 0.0	Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector (m) 18.6 93.0 18.6 93.0 18.6 93.0 18.6 93.0 Trailing Detector (m) 0.0	Detector Template	Left	Thru		Left	Thru		l eft	Thru	Right	Left	Thru	
Detector (m) 0.0 <t< td=""><td>Leading Detector (m)</td><td>18.6</td><td>93.0</td><td></td><td>18.6</td><td>93.0</td><td></td><td>18.6</td><td>93.0</td><td>18.6</td><td>18.6</td><td>93.0</td><td></td></t<>	Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0	18.6	18.6	93.0	
Instance Detector 1 Position(m) 0.0	Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m) 18.6 5.5 18.6 10.0 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	
Detector 1 Type CI+Ex	Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5	18.6	18.6	5.5	
Detector 1 Channel 01 EX 01 EX </td <td>Detector 1 Type</td> <td>CI+Fx</td> <td>Cl+Fx</td> <td></td> <td>Cl+Ex</td> <td>Cl+Ex</td> <td></td> <td>Cl+Ex</td> <td>CI+Ex</td> <td>CI+Ex</td> <td>CI+Ex</td> <td>Cl+Ex</td> <td></td>	Detector 1 Type	CI+Fx	Cl+Fx		Cl+Ex	Cl+Ex		Cl+Ex	CI+Ex	CI+Ex	CI+Ex	Cl+Ex	
Detector 1 Extend (s) 0.0	Detector 1 Channel	OT EX	OI LA		OI LA	OT EX		OI LA	OI LA	OI * EX	OI - EX	OT EX	
Detector 1 Queue (s) 0.0	Detector 1 Extend (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	Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m) 87.5 87.5 87.5 87.5 Detector 2 Size(m) 5.5 5.5 5.5 5.5 Detector 2 Size(m) 5.5 5.5 5.5 5.5 Detector 2 Channel Old Old Old Old Old Detector 2 Extend (s) 0.0 0.0 0.0 0.0 Old Old Turn Type Perm NA Perm NA Perm NA Perm NA Protected Phases 2 6 8 8 4 4 Detector Phase 2 2 6 8 8 4 4	Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Size(m)5.55.55.55.5Detector 2 TypeCI+ExCI+ExCI+ExCI+ExDetector 2 ChannelDetector 2 Extend (s)0.00.00.00.0Detector 2 Extend (s)0.00.00.00.00.0Turn TypePermNAPermNAPermNAProtected Phases2684Permitted Phases26884Detector Phase226688	Detector 2 Position(m)	0.0	87.5		0.0	87.5		0.0	87.5	0.0	010	87.5	
Detector 2 TypeCl+ExCl+ExCl+ExCl+ExDetector 2 Channel0.00.00.00.0Detector 2 Extend (s)0.00.00.00.0Turn TypePermNAPermNAPermProtected Phases2684Permitted Phases26884Detector Phase226688	Detector 2 Size(m)		5.5			5.5			5.5			5.5	
OF EXOF EXOF EXDetector 2 ChannelDetector 2 Extend (s)0.00.00.00.0Turn TypePermNAPermNAPermNAProtected Phases2684Permitted Phases26884Detector Phase226688	Detector 2 Type		CI+Fx			CI+Fx			CI+Fx			CI+Fx	
Detector 2 Extend (s)0.00.00.00.0Turn TypePermNAPermNAPermPermProtected Phases2684Permitted Phases26884Detector Phase226684	Detector 2 Channel												
Turn TypePermNAPermNAPermNAPermNAProtected Phases2684Permitted Phases26884Detector Phase2266884	Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Protected Phases 2 6 8 4 Permitted Phases 2 6 8 8 4 Detector Phase 2 2 6 8 8 4	Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Permitted Phases 2 6 8 8 4 Detector Phase 2 2 6 6 8 8 4	Protected Phases		2			6			8			4	
Detector Phase 2 2 6 6 8 8 8 4 4	Permitted Phases	2	L		6			8	Ū	8	4		
	Detector Phase	2	2		6	6		8	8	8	4	4	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	87.0	87.0		87.0	87.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	72.5%	72.5%		72.5%	72.5%		27.5%	27.5%	27.5%	27.5%	27.5%	
Maximum Green (s)	80.9	80.9		80.9	80.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	1	1		7	7		1	1	1	2	2	
Act Effct Green (s)	92.0	92.0		92.0	92.0			15.6	15.6		15.6	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.13	0.13		0.13	
v/c Ratio	0.03	0.27		0.02	0.60			0.56	0.17		0.02	
Control Delay	4.7	3.9		5.0	8.1			59.7	14.0		0.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	4.7	3.9		5.0	8.1			59.7	14.0		0.2	
LOS	A	A		А	A			E	В		A	
Approach Delay		3.9			8.1			46.8			0.3	
Approach LOS		A			A			D			A	
Queue Length 50th (m)	0.2	13.1		0.5	59.9			20.8	0.0		0.0	
Queue Length 95th (m)	m1.1	22.1		2.6	115.3			33.3	8.3		0.0	
Internal Link Dist (m)	05.0	214.7		10.0	268.8			127.9			38.6	
Turn Bay Length (m)	65.0	0000		40.0	0-70			004	000			
Base Capacity (vph)	186	2389		561	2572			301	366		357	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0 00	0 07		0	0			0	0		0	
Reduced V/c Ratio	0.03	0.27		0.02	0.60			0.33	0.11		0.01	
Intersection Summary	01											
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120				(0)								
Offset: 4 (3%), Referenced to	phase 2:EBT	L and 6:WI	BTL, Start	of Green								
Natural Cycle: 75	la sta d											
Control Type: Actuated-Coord	inated											
Iviaximum V/c Ratio: 0.60					1							
Intersection Signal Delay: 9.2	- CO 10/			In	itersection I	LUS: A						
Intersection Capacity Utilizatio	00.1%			IC	U Level of	Service C						
m Volume for 95th percentile	e queue is m	etered by u	pstream s	ignal.								

Splits and Phases: 4: 473 E of Page & Innes



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	٦	-	-	•	1	1
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	5	44	4 12			1
Traffic Volume (vph)	10	718	1647	5	0	8
Future Volume (vph)	10	718	1647	5	0	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	25.0			0.0	0.0	0.0
Storage Lanes	1			0	0	1
Taper Length (m)	55.0				20.0	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1712	3357	3357	0	0	1559
Flt Permitted	0.950					
Satd. Flow (perm)	1712	3357	3357	0	0	1559
Link Speed (k/h)		60	60		30	
Link Distance (m)		142.1	94.7		74.6	
Travel Time (s)		8.5	5.7		9.0	
Confl. Peds. (#/hr)	5			5		
Confl. Bikes (#/hr)				1		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	3%	1%	1%	1%
Adj. Flow (vph)	10	718	1647	5	0	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	718	1652	0	0	8
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	L NA	Left	Left	R NA	L NA	R NA
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		3.0	3.0		9.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	97			97	97	97
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizati	ion 58.2%			IC	U Level of	Service B
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	*	**	1	*	**	1	*	**	1
Traffic Volume (vph)	625	1873	171	68	841	172	69	243	111	223	260	219
Future Volume (vph)	625	1873	171	68	841	172	69	243	111	223	260	219
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	140.0	1000	80.0	105.0	1000	60.0	50.0	1000	50.0	55.0	1000	60.0
Storage Lanes	2		1	100.0		1	1		1	1		1
Taper Length (m)	40.0			40.0			10.0		I.	20.0		
Lane Litil Factor	0.07	0 95	1 00	1 00	0 95	1 00	1 00	0.95	1 00	1 00	0.95	1 00
Ped Bike Factor	0.07	0.00	0.9/	1.00	0.00	0.07	0.00	0.00	0.96	0.08	0.00	0.97
Frt	0.00		0.54	1.00		0.850	0.00		0.50	0.00		0.57
Fit Protected	0 950		0.000	0 950		0.000	0 950		0.000	0 950		0.000
Satd Flow (prot)	3288	3357	1532	1712	3293	1517	1712	3390	1532	1712	3390	1532
Elt Permitted	0200	0001	1002	0.950	0200	1017	0.452	0000	1002	0.601	0000	1002
Satd Flow (perm)	3265	3357	1//6	1706	3203	1/175	80/	3300	1/73	1062	3300	1/180
Right Turn on Red	5205	0001	Yes	1700	0200	Yes	004	0000	Yes	1002	0000	Yes
Satd Flow (RTOR)			130			105			13/			210
Link Speed (k/b)		60	100		60	155		50	10-		50	215
Link Distance (m)		264.5			101 1			387.7			301.0	
Travel Time (s)		15.0			20.5			27.0			21.7	
Confl Peds (#/br)	7	15.5	າງ	22	23.5	7	15	21.5	18	18	21.7	15
Confl. Pikos (#/hr)	I		1	22		3	IJ		10	10		15
Book Hour Easter	1.00	1 00	1 00	1 00	1 00	1 00	1.00	1.00	1 00	1 00	1 00	1 00
	20/	30/	1.00	1.00	F%	2%	1.00	20/	1.00	1.00	20/	1.00
Adi Flow (vob)	2 /0 625	1973	171	68	9/1	2 /0 170	60	2/0	1/0	1 /0	2 /0	210
Shared Lane Traffic (%)	020	1075	17.1	00	041	172	09	243	111	225	200	213
Lang Group Flow (uph)	625	1973	171	68	Q/1	170	60	2/12	111	222	260	210
Enter Blocked Interpretion	025	IOTS No	No	No	041	No	09 No	243 No	No	ZZ3	200	219
		INU Loff			INU			INU			INU Loff	
Lane Alignment Modion Width(m)	LINA		RINA	LINA		RINA	LINA	Leit	RINA	LINA	Leit 6.0	RINA
Link Offcot(m)		9.0			7.4			0.0			0.0	
Crocowelk Width(m)		0.0 5.0			0.0 E 0			0.0 E 0			0.0 5.0	
		5.0			5.0			5.0			5.0	
Hoodway Easter	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Number of Detectors	24	2	14	24	2	14	24	2	14	24	2	14
Detector Templete	l off	Z	Diaht	l off	Z	Diabt	l off	Z	Diabt	l off	Z	Diabt
Loading Detector (m)	18.6	03.0	18.6	18.6	03.0	18.6	18.6	03.0	18.6	18.6	03.0	18.6
Trailing Detector (m)	10.0	93.0	10.0	10.0	93.0	10.0	10.0	93.0	10.0	10.0	93.0	10.0
Detector 1 Desition(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 Sizo(m)	18.6	0.0	18.6	18.6	0.0	18.6	18.6	0.0	18.6	18.6	0.0	18.6
Detector 1 Type												
Detector 1 Channel	OITEX						CITEX	CITEX	OI+EX			
Detector 1 Extend (c)	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 Desition(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 2 Fosition(III)		5.5			67.5			67.5			5.5	
Detector 2 Size(III)												
Detector 2 Type		CI+EX			CI+EX			UI+EX			UI+EX	
Detector 2 Extend (a)		0.0			0.0			0.0			0.0	
Turn Tuno	Drot	0.0	Dorm	Drot	0.0	Dorm	nm i nt	0.0	Dorm	Dorm	0.0	Deres
	Prot	NA 0	reim	Prot	INA C	reim	pm+pt		Perm	reim	NA 4	Perm
Protected Phases	5	2	0	I	0	0	3	õ	0	4	4	
Petrotor Phases	F	0	2	1	6	0	ð 2	0	Õ	4	Λ	4
Delector Phase	5	2	2	1	0	0	3	ō	Ō	4	4	4

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Lane Group EBL EBT EBR WBL WBT WBL NBT NBR SBL SBR SBR Switch Phase		٦	-	\mathbf{r}	4	+	•	•	1	1	1	ţ	~
Switch Phase Solution	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Inimum (minum (s)) 50 100 100 50 100	Switch Phase												
Intrium Spir (s) 116 282 262 112 282 282 11 327 327 327 327 Total Spir (s) 350 710 110 420 480 480 120 470 470 350 <td>Minimum Initial (s)</td> <td>50</td> <td>10.0</td> <td>10.0</td> <td>50</td> <td>10.0</td> <td>10.0</td> <td>50</td> <td>10.0</td> <td>10.0</td> <td>10.0</td> <td>10.0</td> <td>10.0</td>	Minimum Initial (s)	50	10.0	10.0	50	10.0	10.0	50	10.0	10.0	10.0	10.0	10.0
Total Split (s) 350 710	Minimum Split (s)	11.6	26.2	26.2	11.2	26.2	26.2	11.7	32.7	32.7	32.7	32.7	32.7
Total Spiit (%) 26.9% 54.6% 9.2% 36.9% 9.2% 36.2% 36.2% 26.9%	Total Split (s)	35.0	71.0	71.0	12.0	48.0	48.0	12.0	47.0	47.0	35.0	35.0	35.0
Maximum Green (s) 28.4 64.8 64.8 5.8 41.8 5.3 40.3 40.3 28.3 28.3 28.3 Yellow Time (s) 3.7 3.7 3.7 3.7 3.3	Total Split (%)	26.9%	54.6%	54.6%	9.2%	36.9%	36.9%	9.2%	36.2%	36.2%	26.9%	26.9%	26.9%
Tellow Time (s) 3.7	Maximum Green (s)	28.4	64.8	64.8	5.8	41.8	41.8	5.3	40.3	40.3	28.3	28.3	28.3
Alter Red Time (s) 2.9 2.5	Yellow Time (s)	37	37	37	3.7	37	37	33	33	33	20.0	20.0	20.0
Land Link (Link) Lo Lo <thlo< th=""> Lo Lo</thlo<>	All-Red Time (s)	2.9	2.5	2.5	2.5	2.5	2.5	3.4	3.4	3.4	3.4	3.4	3.4
Total Lost Trube (s) 66 62 62 62 62 62 67 <td>Lost Time Adjust (s)</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.1</td> <td>0.1</td> <td>0.1</td> <td>0.1</td> <td>0.0</td>	Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Name Lead Leg Leg <thleg< t<="" td=""><td>Total Lost Time (s)</td><td>6.6</td><td>6.2</td><td>6.0</td><td>6.2</td><td>6.2</td><td>6.2</td><td>6.7</td><td>6.7</td><td>6.7</td><td>6.7</td><td>6.7</td><td>6.7</td></thleg<>	Total Lost Time (s)	6.6	6.2	6.0	6.2	6.2	6.2	6.7	6.7	6.7	6.7	6.7	6.7
Lead-Lag Optimize? Los Los <thlo< th=""> <thlos< th=""> <thlos< th=""></thlos<></thlos<></thlo<>	Lead/Lag	l ead	Lan	Lag	Lead	Lan	Lag	Lead	0.1	0.1	Lag	Lan	Lag
Control Control 3.0	Lead-Lag Ontimize?	Loud	Lug	Lug	Loud	Lug	Lug	Loud			Lug	Lug	Lug
Recall Mode None C-Max C-Max C-Max C-Max C-Max C-Max None None <td>Vehicle Extension (s)</td> <td>30</td> <td>3.0</td>	Vehicle Extension (s)	30	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Note induce Teste Data Teste Teste <thteste< th=""> Teste</thteste<>	Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
High Dori Walk (s) 130 130 130 130 130 130 190 120 122 120 120 120 </td <td>Walk Time (s)</td> <td>None</td> <td>7.0</td> <td>7.0</td> <td>None</td> <td>7.0</td> <td>7.0</td> <td>None</td> <td>7.0</td> <td>7.0</td> <td>7.0</td> <td>7.0</td> <td>7.0</td>	Walk Time (s)	None	7.0	7.0	None	7.0	7.0	None	7.0	7.0	7.0	7.0	7.0
Name Note	Flash Dont Walk (s)		13.0	13.0		13.0	13.0		19.0	19.0	19.0	19.0	19.0
Construction Construction Construction 22 10 <td< td=""><td>Pedestrian Calls (#/hr)</td><td></td><td>22</td><td>22</td><td></td><td>7</td><td>7</td><td></td><td>32</td><td>32</td><td>15.0</td><td>15.0</td><td>15.0</td></td<>	Pedestrian Calls (#/hr)		22	22		7	7		32	32	15.0	15.0	15.0
Nuclear Order (9) 21.47 00.00 00.00 44.51 44.50 00.00 <td>Act Effet Green (s)</td> <td>27 /</td> <td>66.3</td> <td>66.3</td> <td>63</td> <td>11 9</td> <td>11 9</td> <td>38.3</td> <td>38.3</td> <td>38.3</td> <td>28.7</td> <td>28.7</td> <td>28.7</td>	Act Effet Green (s)	27 /	66.3	66.3	63	11 9	11 9	38.3	38.3	38.3	28.7	28.7	28.7
Number of the set of	Actuated q/C Ratio	0.21	0.51	0.51	0.0	0.35	0.35	0.29	0.20	0.20	0.22	0.22	0.22
Approach Disk	v/c Ratio	0.21	1.09	0.01	0.00	0.33	0.33	0.25	0.23	0.23	0.22	0.22	0.22
Onitor Bully Onitor Onitor Onitor Onitor First Out Out </td <td>Control Delay</td> <td>67.5</td> <td>83.7</td> <td>5.1</td> <td>107.9</td> <td>53.5</td> <td>11 3</td> <td>35.2</td> <td>35.0</td> <td>4.0</td> <td>98.3</td> <td>44 5</td> <td>83</td>	Control Delay	67.5	83.7	5.1	107.9	53.5	11 3	35.2	35.0	4.0	98.3	44 5	83
Social Delay Social Discrete Social Discre Social Discrete Social Discrete		0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersectory Or.5 Or.5 <td>Total Delay</td> <td>67.5</td> <td>83.7</td> <td>5.0</td> <td>107.9</td> <td>53.5</td> <td>11.3</td> <td>35.2</td> <td>35.0</td> <td>4.0</td> <td>98.3</td> <td>44.5</td> <td>83</td>	Total Delay	67.5	83.7	5.0	107.9	53.5	11.3	35.2	35.0	4.0	98.3	44.5	83
Loc L H L <thl< th=""> <thl< th=""> <thl< th=""></thl<></thl<></thl<>		67.5 F	50.7 F	Δ	107.5	00.0 D	R R	00.2 D	00.0 D	μ.υ Δ	50.0 F	ידי. ח	Δ
Approach LOS E D C D D C D Queue Length 50th (m) 73.9 -267.3 3.8 16.4 109.3 4.3 11.7 22.4 0.0 52.5 27.5 0.0 Queue Length 95th (m) #100.5 #306.0 14.7 #42.1 116.2 19.3 22.3 32.3 8.1 #98.7 39.4 18.7 Internal Link Dist (m) 240.5 467.4 363.7 277.9 77.9 Tum Bay Length (m) 140.0 80.0 105.0 60.0 50.0 55.0 60.0 0	Approach Delay	L.	74.8	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		50.2	U	U	26.9	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		50.3	~
Approximation 73.9 ~267.3 3.8 16.4 109.3 4.3 11.7 22.4 0.0 52.5 27.5 0.0 Queue Length 95th (m) #100.5 #306.0 14.7 #42.1 116.2 19.3 22.3 32.3 8.1 #98.7 39.4 18.7 Internal Link Dist (m) 240.5 467.4 363.7 277.9 77.7 77.9 77.7	Approach LOS		F			D			C			D	
Course Length 95th (m) #100.5 #306.0 14.7 #42.1 116.2 19.3 22.3 32.3 8.1 #98.7 39.4 18.7 Internal Link Dist (m) 240.5 467.4 363.7 277.9 7 Turn Bay Length (m) 140.0 80.0 105.0 60.0 50.0 55.0 60.0 Base Capacity (vph) 718 1712 805 83 1136 636 273 105.0 549 234 747 497 Starvation Cap Reductn 0	Queue Length 50th (m)	73.9	~267.3	38	16.4	109.3	43	11 7	22.4	0.0	52.5	27.5	0.0
Internal Link Dist (m) 240.5 467.4 363.7 277.9 Turn Bay Length (m) 140.0 80.0 105.0 60.0 50.0 55.0 60.0 Base Capacity (vph) 718 1712 805 83 1136 636 273 1050 54.9 234 747 497 Starvation Cap Reductn 0 16.4	Queue Length 95th (m)	#100.5	#306.0	14.7	#42.1	116.2	19.3	22.3	32.3	8.0	#98.7	39.4	18.7
Turn Bay Length (m) 140.0 80.0 105.0 60.0 50.0 55.0 60.0 Base Capacity (vph) 718 1712 805 83 1136 636 273 1050 549 234 747 497 Starvation Cap Reducth 0	Internal Link Dist (m)	1100.0	240.5		<i>"</i> . <u>-</u>	467.4	10.0	22.0	363.7	0.1	//00.1	277.9	10.1
Base Capacity (vph) 718 1712 805 88 1136 636 273 1050 549 234 747 497 Starvation Cap Reductn 0	Turn Bay Length (m)	140.0	210.0	80.0	105.0	10111	60.0	50.0	000.1	50.0	55.0	211.0	60.0
Starvation Cap Reductn 0 <td>Base Capacity (vph)</td> <td>718</td> <td>1712</td> <td>805</td> <td>83</td> <td>1136</td> <td>636</td> <td>273</td> <td>1050</td> <td>549</td> <td>234</td> <td>747</td> <td>497</td>	Base Capacity (vph)	718	1712	805	83	1136	636	273	1050	549	234	747	497
Dillback Cap Reductin 0	Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Springer Cap Reduction 0	Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio 0.87 1.09 0.21 0.82 0.74 0.27 0.25 0.23 0.20 0.95 0.35 0.44 Intersection Summary Area Type: Other Other<	Storage Cap Reductn	0	0	0 0	0	0	0	0	0	0	0	0	0 0
Intersection Summary Area Type: Other Cycle Length: 130 Actuated Cycle Length: 130 Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.09 Intersection Signal Delay: 61.7 Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes	Reduced v/c Ratio	0.87	1.09	0.21	0.82	0.74	0.27	0.25	0.23	0.20	0.95	0.35	0.44
Area Type: Other Cycle Length: 130 Actuated Cycle Length: 130 Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.09 Intersection Signal Delay: 61.7 Intersection LOS: E Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Intersection Summary												
Cycle Length: 130 Actuated Cycle Length: 130 Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.09 Intersection Signal Delay: 61.7 Intersection LOS: E Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Area Type:	Other											
Actuated Cycle Length: 130 Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.09 Intersection Signal Delay: 61.7 Intersection LOS: E Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Cycle Length: 130												
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.09 Intersection LOS: E Intersection Capacity Utilization 107.7% IcU Level of Service G Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes	Actuated Cycle Length: 130												
Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.09 Intersection Signal Delay: 61.7 Intersection LOS: E Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes	Offset: 4 (3%). Referenced to r	phase 2:EBT	and 6:WE	3T. Start of	Green								
Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.09 Intersection Signal Delay: 61.7 Intersection LOS: E Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes	Natural Cycle: 145			,									
Maximum v/c Ratio: 1.09 Intersection Signal Delay: 61.7 Intersection LOS: E Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 - ~ Volume exceeds capacity, queue is theoretically infinite. - Queue shown is maximum after two cycles. - # 95th percentile volume exceeds capacity, queue may be longer. - Queue shown is maximum after two cycles. - Splits and Phases: 1: Orleans & Innes	Control Type: Actuated-Coordi	inated											
Intersection Signal Delay: 61.7 Intersection LOS: E Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 - ~ Volume exceeds capacity, queue is theoretically infinite. - Queue shown is maximum after two cycles. - # 95th percentile volume exceeds capacity, queue may be longer. - Queue shown is maximum after two cycles. - Splits and Phases: 1: Orleans & Innes	Maximum v/c Ratio: 1.09												
Intersection Capacity Utilization 107.7% ICU Level of Service G Analysis Period (min) 15 - Volume exceeds capacity, queue is theoretically infinite. - Queue shown is maximum after two cycles. - # 95th percentile volume exceeds capacity, queue may be longer. - Queue shown is maximum after two cycles. - Splits and Phases: 1: Orleans & Innes	Intersection Signal Delay: 61.7	7			In	tersection	LOS: E						
Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes	Intersection Capacity Utilizatio	n 107.7%			IC	CU Level o	f Service G						
 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes 	Analysis Period (min) 15												
Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes	 Volume exceeds capacity, 	queue is the	eretically i	nfinite.									
 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes 	Queue shown is maximum	after two cvo	cles.										
Queue shown is maximum after two cycles. Splits and Phases: 1: Orleans & Innes	# 95th percentile volume exc	ceeds capaci	ty, queue i	may be lon	ger.								
Splits and Phases: 1: Orleans & Innes	Queue shown is maximum	after two cyc	cles.	·	-								
	Splits and Phases: 1: Orlean	ns & Innes											



2: Page & Innes PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	7	≜ 1.			1	A 1.			4			4
Traffic Volume (vph)	63	1923	30	6	93	954	64	23	7	77	54	18
Future Volume (vph)	63	1923	30	6	93	954	64	23	7	77	54	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0		45.0		0.0	0.0		0.0	0.0	
Storage Lanes	1		0		1		0	0		0	0	
Taper Length (m)	35.0		•		55.0			25		· ·	25	
Lane Util Factor	1 00	0.95	0.95	0.95	1 00	0.95	0.95	1 00	1 00	1 00	1 00	1 00
Ped Bike Factor	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.08	1.00	1.00	0 99
Frt	1.00	0 998				0 991			0.00			0.00
Elt Protected	0.950	0.000			0.950	0.001			0.000			0.000
Satd Flow (prot)	1605	3380	٥	٥	160/	3262	٥	٥	15/1	٥	٥	1578
Salu. Flow (plot)	0.000	3300	U	0	0.044	5202	0	U	0.017	0	U	0.754
Fit Fermitted	0.202	2200	٥	٥	0.044	2060	٥	٥	1407	٥	٥	1011
Salu. Flow (perifi)	501	3300	Vee	U	10	3202	Vaa	U	1427	Vaa	U	1211
Right Turn on Red		0	res			44	res		C 2	res		40
Sato. Flow (RTOR)		2				11			63			18
Link Speed (k/h)		60				60			40			40
Link Distance (m)		491.4				142.1			212.5			273.4
Travel Time (s)		29.5				8.5			19.1			24.6
Confl. Peds. (#/hr)	9		5		5		9	5		13	13	
Confl. Bikes (#/hr)			1							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%	6%	3%	2%	5%	2%	5%	1%	3%	6%	1%
Adj. Flow (vph)	63	1923	30	6	93	954	64	23	7	77	54	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	1953	0	0	99	1018	0	0	107	0	0	108
Enter Blocked Intersection	No	No	No	No	No	Yes	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA	Left
Median Width(m)		5.0				5.0			0.0			0.0
Link Offset(m)		0.0				0.0			0.0			0.0
Crosswalk Width(m)		10.0				10.0			5.0			5.0
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	14	24		14	24		14	24	
Number of Detectors	1	2	••	1	1	2	••	1	2		1	2
Detector Template	l eft	Thru		l eft	Left	Thru		Left	Thru		l eft	Thru
Leading Detector (m)	18.6	03.0		18.6	18.6	03.0		18.6	03.0		18.6	03.0
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)	18.6	5.5		18.6	18.6	0.0 5.5		18.6	0.0 5.5		18.6	5.5
Detector 1 Size(iii)												
Detector 1 Channel						CITEX		CITEX				
Detector 1 Channel	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
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)		87.5				87.5			87.5			87.5
Detector 2 Size(m)		5.5				5.5			5.5			5.5
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			CI+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Perm	NA		pm+pt	pm+pt	NA		Perm	NA		Perm	NA
Protected Phases		2		1	1	6			8			4
Permitted Phases	2			6	6			8			4	
Detector Phase	2	2		1	1	6		8	8		4	4

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Lane Group	SBR	
Lane		
Traffic Volume (vph)	36	
Future Volume (vph)	36	
Ideal Flow (vphpl)	1800	
Storage Length (m)	0.0	
Storage Lanes	0	
Taper Length (m)	-	
Lane Util Factor	1 00	
Ped Bike Factor	1.00	
Frt		
Elt Protected		
Satd Flow (prot)	0	
Elt Permitted	Ū	
Satd Flow (perm)	٥	
Right Turn on Red	Ves	
Satd Flow (PTOP)	163	
Link Speed (k/h)		
Link Distance (m)		
Travel Time (a)		
Confl Dodo (#/br)	F	
Confl. Peus. (#/hr)	5	
Conii. Bikes (#/iii)	1.00	
Peak Hour Factor	1.00	
Heavy venicles (%)	11%	
Adj. Flow (Vpn)	30	
Shared Lane Traffic (%)	•	
Lane Group Flow (vph)	0	
Enter Blocked Intersection	No	
Lane Alignment	R NA	
Median Width(m)		
Link Offset(m)		
Crosswalk Width(m)		
Two way Left Turn Lane		
Headway Factor	1.06	
Turning Speed (k/h)	14	
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)		
Turn Type		
Protected Phases		
Permitted Phases		
Detector Phase		

J.Audia, Novatech

2: Page & Innes PM Peak Hour

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		_	•	-	•			1	1	1		•
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Switch Phase	40.0	10.0		- 0	- 0	10.0		10.0	40.0		40.0	10.0
Minimum Initial (s)	10.0	10.0		5.0	5.0	10.0		10.0	10.0		10.0	10.0
Minimum Split (s)	39.2	39.2		11.2	11.2	39.2		37.8	37.8		37.8	37.8
Total Split (S)	80.0	80.0		12.0	12.0	92.0		38.0	38.0		38.0	38.0
l otal Split (%)	61.5%	01.5%		9.2%	9.2%	/0.8%		29.2%	29.2%		29.2%	29.2%
Maximum Green (s)	/3.8	/ 3.8		5.8	5.8	85.8		31.2	31.2		31.2	31.2
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.0	3.0		3.0	3.0
All-Red Time (S)	2.5	2.5		2.5	2.5	2.5		3.8	3.8		3.8	3.8
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0			0.0
Total Lost Time (S)	0.2	0.2		Lood	0.2	0.2			0.0			0.0
Lead/Lag	Lag	Lag		Leau	Leau							
Vehicle Extension (a)	2.0	2.0		2.0	2.0	2.0		2.0	2.0		2.0	2.0
Pocall Mode	C Max	C Max		S.U Nono	S.U Nono	C Max		S.U Nono	S.U Nono		S.U Nono	S.U Nono
Walk Time (s)	0-IVIAX	0-iviax 15.0		NOTE	NOTE	0-iviax 15.0						
Flach Dont Walk (c)	18.0	18.0				18.0		24.0	24.0		24.0	24.0
Pedestrian Calls (#/hr)	10.0	5				10.0 Q		24.0	24.0		24.0	24.0
Act Effet Green (s)	84.2	84.2			97 4	97.4		10	19.6		5	19.6
Actuated q/C Ratio	0.65	0.65			0.75	0.75			0.15			0.15
v/c Ratio	0.00	0.00			0.68	0.70			0.10			0.10
Control Delay	32	7.6			58.1	4.3			24.5			50.4
Queue Delay	0.0	0.0			0.0	0.0			0.0			0.0
Total Delay	3.2	7.6			58.1	4.3			24.5			50.4
LOS	A	A			E	A			C			D
Approach Delay		7.4				9.1			24.5			50.4
Approach LOS		А				А			С			D
Queue Length 50th (m)	1.6	30.8			10.4	20.4			9.7			20.8
Queue Length 95th (m)	m2.0	m31.8			m#37.8	27.1			22.7			33.7
Internal Link Dist (m)		467.4				118.1			188.5			249.4
Turn Bay Length (m)	100.0				45.0							
Base Capacity (vph)	324	2188			146	2447			390			304
Starvation Cap Reductn	0	0			0	0			0			0
Spillback Cap Reductn	0	0			0	0			0			0
Storage Cap Reductn	0	0			0	0			0			0
Reduced v/c Ratio	0.19	0.89			0.68	0.42			0.27			0.36
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 4 (3%), Referenced to	o phase 2:EBT	L and 6:W	BTL, Start	of Green								
Natural Cycle: 130	P ()											
Control Type: Actuated-Cool	rdinated											
Iviaximum v/c Ratio: 0.89	0				· (*							
Intersection Signal Delay: 9.	9			In	tersection	LUS: A						
Intersection Capacity Utilizat	10n 94 7%			IC	U Level O	T Service F						

Intersection Capacity Utilization 94.2% Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Page & Innes


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Lane Group	SBR
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Lane Group EBT EBR WBL NBL NBR Ø.3 Ø8 Lane Group 155 324 177 948 217 205 Future Volume (vph) 1595 324 177 948 217 205 Storage Length (m) 500 1600 1800 1800 1800 1800 1800 Storage Length (m) 500 65.0 70.0 70.0 500 500 100		-	\rightarrow	-	+	1	1			
Lane Configurations Image of the second	Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø8	
Traffic Volume (rph) 1955 324 177 948 217 205 Isideal Row (rph) 1800 1800 1800 1800 1800 1800 Storage Langth (m) 50.0 65.0 70.0 70.0 70.0 Storage Langth (m) 50.0 65.0 70.0 70.0 70.0 Taper Length (m) 0.95 1.00 0.95 1.00 1.00 70.0 Ped Bke Factor 0.95 0.950 0.850 0.850 0.850 Fit Perioted 0.950 0.950 0.850 0.850 0.850 Stadi Flow (pote) 3357 1479 194 347 1502 Stadi Flow (pote) 3357 1443 147 Conf.Pads. (pote) 100 Link Space (wh) 60 60 50 5 5 Shard Lana Taffic (%) 100 1.00 1.00 1.00 1.00 Link Space (wh) 60 50 3.7 1.43 14.7 <t< td=""><td>Lane Configurations</td><td>**</td><td>1</td><td>N</td><td>**</td><td>N</td><td>1</td><td></td><td></td><td></td></t<>	Lane Configurations	**	1	N	**	N	1			
Fulue Volume (wh) 1595 324 177 948 217 205 Storage Length (m) 500 650 700 700 700 Storage Length (m) 500 650 700 700 700 Storage Length (m) 800 900 100 100 700 Lane Uhi Factor 0.95 100 1.00 990 100 1.00 Ped Ske Factor 0.950 0.950 0.950 1002 1102 1102 Stad. Flow (prot) 3357 1612 1679 1502 1502 1502 Stad. Flow (prot) 3357 1643 1502 15032 150	Traffic Volume (vph)	1595	324	177	948	217	205			
isias How (vph) 1800 1800 1800 1800 1800 Storage Length (m) 50.0 65.0 70.0 70.0 Storage Langth (m) 80.0 20.0 70.0 70.0 Taper Length (m) 80.0 20.0 70.0 70.0 Iten but Factor 0.95 1.00 1.00 1.00 1.00 Ped Ske Factor 0.950 0.950 0.950 71.0 71.0 Stadi Flow (prot) 3357 149.0 196.0 95.0 95.0 Stadi Flow (prot) 3357 149.0 196.0 95.0 95.0 Stadi Flow (prot) 357 149.1 196.2 71.1 71.1 Right Turo n Red Yes Yes Yes Yes Yes Stadi Flow (prot) 71.1	Future Volume (vph)	1595	324	177	948	217	205			
Shorage Langth (m) Solo 65.0 70.0 70.0 Taper Length (m) 80.0 20.0 - Lane Uli, Factor 0.95 1.00 1.00 Ped Bike Factor 0.850 - 0.850 Fit 0.850 - 0.850 Fit Protected 0.950 0.950 - Said, Flow (prot) 3357 1679 1502 Said, Flow (prot) 3357 1449 104 3357 Said, Flow (prot) 3357 1449 104 357 Said, Flow (prot) 166 - 10 - Link Speed (wh) 60 60 50 - Said, Flow (prot) 156 5 5 - Peak Hour Factor 1.00 1.00 1.00 1.00 1.00 Link Obstance (m) 9.47 7238.7 204.5 - - Targe Targe Targe (wh) 6.0 6 5 5 - State Flow (RTOR)	Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Shrange Lanes 1 1 1 0 Taper Length (m) 80.0 20.0	Storage Length (m)		50.0	65.0		70.0	70.0			
Tape Length (m) 80.0 20.0 Lane UH, Factor 0.95 1.00 0.95 1.00 1.00 Add Nice Factor 0.860 0.860 0.860 0.860 0.860 Frt Potentied 0.950 0.950 0.860 0.860 0.860 Stad. Flow (prot) 3357 1502 1679 1502 0.870 Stad. Flow (perm) 3357 1449 104 3357 1679 1502 Stad. Flow (perm) 3357 1449 104 3357 1679 1502 Stad. Flow (perm) 3357 1449 104 3357 1679 1502 Stad. Flow (PROR) 166 10 100 100 100 100 Link Stearce (m) 9.47 238.7 204.5 10 100	Storage Lanes		1	1		1	0			
Lane UIL Factor 0.95 1.00 1.00 0.95 1.00 1.00 Ped Bike Factor 0.96 0.950 0.850 0.850 FIP Protected 0.950 0.950 0.950 0.950 Satil, Flow (prot) 3357 1649 1502 0.950 Satil, Flow (prot) 3357 1649 1502 0.950 Satil, Flow (prot) 357 1649 1602 0.950 Satil, Flow (prot) 357 1649 1602 0.950 Satil, Flow (prot) 357 1649 1602 0.950 Satil, Flow (prot) 160 100 1.00 1.00 1.00 Link Splace (Mr) 6 6 5 5 5 Pack Hour Factor 1.00 1.00 1.00 1.00 1.00 1.00 Adj Flow (vph) 1595 324 177 948 217 205 Earler Blocked Intersection No No No No No No <t< td=""><td>Taper Length (m)</td><td></td><td></td><td>80.0</td><td></td><td>20.0</td><td>-</td><td></td><td></td><td></td></t<>	Taper Length (m)			80.0		20.0	-			
Pad Bike Factor 0.96 0.98 Frt 0.950 0.860 Frt Protected 0.950 0.950 Sald. Flow (pnot) 3357 1502 1679 1502 Sald. Flow (perm) 3357 1449 104 3357 1679 1502 Sald. Flow (perm) 3357 1449 104 3357 1645 1502 Link Speed (kh) 60 00 0950 0950 0950 0950 Sald. Flow (perm) 3357 1449 104 3357 1645 1502 Free Stephen Presson 0950 Link Speed (kh) 60 60 50 10 100 <td>Lane Util, Factor</td> <td>0.95</td> <td>1.00</td> <td>1.00</td> <td>0.95</td> <td>1.00</td> <td>1.00</td> <td></td> <td></td> <td></td>	Lane Util, Factor	0.95	1.00	1.00	0.95	1.00	1.00			
Pri 0.850 0.850 PI Protected 0.950 0.950 Stat Flow (pot) 3357 1679 1502 FI Pometted 0.059 0.950 0.950 Stat Flow (perm) 3357 1439 104 357 Right Tum on Red Yes Yes Yes Yes Stat Flow (perm) 3357 1443 14.7 100 Link Speed (kfh) 60 60 50 100 1.00 Link Speed (kfh) 60 60 5 5 5 Peak Hour Factor 1.00 1.00 1.00 1.00 1.00 Adj, Flow (vph) 1595 324 177 948 217 205 Lane Alagnement Left No< No	Ped Bike Factor		0.96		0.00	0.98				
Pi Protected 0.950 0.950 0.950 Satd, Flow (prot) 3357 1502 1679 1502 Satd, Flow (prot) 3357 1449 104 3357 1679 1502 Satd, Flow (perm) 3357 1449 104 3357 1679 1502 Satd, Flow (prot) 3357 1449 104 3357 1679 1502 Satd, Flow (RTOR) 166 10 10 10 10 10 Link Speed (kh) 60 60 50 5 5 Confl. Peds, (#ht) 6 6 5 5 5 Peak Hour Factor 1.00 1.00 1.00 1.00 1.00 1.00 Alg. Flow (ph) 1595 324 177 948 217 205 5 Shared Lane Traffic (%) Eare Algoment Left Right Left No	Frt		0.850			0.00	0.850			
Said Flow (prot) 3357 1502 1679 3357 1679 1502 FI Permitted 0.059 0.930 930 930 Said Flow (perm) 3357 1449 104 3357 1645 1502 Righ Turn on Red Yes Yes Yes Yes Said Flow (Porm) 347 143 110 Link Speace (Irk) 60 6 5 5 Formation (Port (Po	Elt Protected			0.950		0.950				
Pit Permitted 0.059 0.950 Satd. Flow (perm) 3357 1449 104 3357 1645 1502 Satd. Flow (Ptorm) 3357 1449 104 3357 1645 1502 Satd. Flow (RTOR) 166 10 10 110	Satd, Flow (prot)	3357	1502	1679	3357	1679	1502			
Sid: Flow (perm) 3357 1449 104 3357 1645 1502 Right Tum on Red Yes Yes Yes Yes Said: Flow (ROR) 16 10 10 Link Spead (kh) 60 60 50 Link Distance (m) 94.7 238.7 204.5 Travel Time (s) 5.7 6 6 5 Peak Hour Factor 1.00 1.00 1.00 1.00 Lane Group Flow (vph) 1595 324 177 948 217 205 Shared Lane Traffic (%) Lane Alignment Left Kiph Left Left No No Lane Alignment Left Kiph Left Left No No No Cosswalk Width(m) 0.0 0.0 0.0 0.0 0.0 0.0 Cosswalk Width(m) 9.0 9.0 1 2 1 1 Varber of Detectors 2 1 1 2 1 1	Elt Permitted	0001	1002	0.059	0001	0.950	1002			
Right Tum on Red Yes Yes Yes Said. Flow (RTOR) 166 10 Link Speed (k/h) 60 50 Link Speed (k/h) 6 5 Tavel Time (s) 5.7 14.3 14.7 Confl. Peds. (#/hr) 6 6 5 5 Peak Hour Factor 1.00 1.00 1.00 1.00 Jan Group Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Lane Alignment Left Right Left Left L NA R NA Median Width(m) 0.0 0.0 0.0 Crosswaik Width(m) 9.0 9.0 9.0 Troin Speed (k/h) 14 24 24 14 Name Detector Template Thrue Right Left Right Left Right Leadway Factor 1.06 1.06 1.06 1.06 1.06 1.	Satd Flow (perm)	3357	1449	104	3357	1645	1502			
Said. Flow (RTOR) 166 10 Link Speed (kh) 60 50 Link Distance (m) 94.7 228.7 220.5 Travel Time (s) 5.7 14.3 14.7 Confl. Peds. (#hr) 6 6 5 Peak Hour Factor 1.00 1.00 1.00 1.00 Adj. Flow (vph) 1595 324 177 948 217 205 Shared Lane Traffic (%) Lane Algment Left Kight Left LN RNA Median Width(m) 5.0 5.0 3.7 Link Offset(m) 0.0 0.0 0.0 0.0 Lane Alignment Left Right Left IN RNA	Right Turn on Red	0001	Yes	101	0001	1010	Yes			
Link Speed (kh) 60 50 10 Link Distance (m) 94.7 238.7 204.5 Travel Time (s) 5.7 14.3 14.7 Confl. Peds. (#hn) 6 6 5 5 Peak Hour Factor 1.00 1.00 1.00 1.00 Al.7 Lane Group Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Lane Group Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Lane Atigmment Left Left LAN RNA Median Width(m) 9.0 To Tow avy Left Tum Lane - - - 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.0	Satd Flow (RTOR)		166				10			
Link Distance (m) 94.7 238.7 204.5 Travel Time (s) 5.7 14.3 14.7 Confl. Peds: (#hr) 6 6 5 Peak Hour Factor 1.00 1.00 1.00 1.00 Adj. Flow (vph) 1595 324 177 948 217 205 Shared Lane Traffic (%) 205 Lane Group Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Lane Aigment Left Left LNA RNA Median Width(m) 5.0 3.7 Link Offset(m) 0.0 0.0 0.0 0.0 Cresswaik Width(m) 9.0 9.0 9.0 Two way Left Turn Lane Headway Factor 1.06 1.06 1.06 1.06 1.06 1.06 Training Speed (k/h) 14 24 24 14 14 24	Link Speed (k/h)	60	100		60	50	10			
Instruction Instruction Instruction Instruction Conf. Peeds. (#hr) 6 6 5 5 Peak Hour Factor 1.00 1.00 1.00 1.00 Adj. Flow (vph) 1595 324 177 948 217 205 Shared Lane Traffic (%) Lane Group Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No Lane Alignment Left Right Left Left <td< td=""><td>Link Distance (m)</td><td>94.7</td><td></td><td></td><td>238.7</td><td>204.5</td><td></td><td></td><td></td><td></td></td<>	Link Distance (m)	94.7			238.7	204.5				
Index (init) (i) 0.1 0.1 1.00 1.00 1.00 1.00 Confl. Peds (i) 1595 324 177 948 217 205 Shared Lane Traffic (%) 1595 324 177 948 217 205 Enter Block dithresection Yes No No No No Lane Alignment Left Right Left L NA R NA Median Width(m) 5.0 3.7	Travel Time (s)	5.7			14.3	14.7				
Deak Hour Factor 1.00 1.00 1.00 1.00 1.00 Adj. Flow (vph) 1595 324 177 948 217 205 Shared Lane Traffic (%) Lane Group Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Median Width(m) 5.0 5.0 3.7 Link Offset(m) 0.0 0.0 0.0 Crosswalk Width(m) 9.0 9.0 9.0 Tow may Left Turn Lane Headway Factor 1.06	Confl Peds (#/hr)	0.1	6	6	14.0	5	5			
Adi, Flow (vph) 1595 324 177 948 217 205 Shared Lane Traffic (%) Lane Group Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Lane Group Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Lane Alignment Left Left LAN R NA Median Width(m) 0.0 0.0 0.0 0.0 Tow way Left Tum Lane Headway Factor 1.06 1.06 1.06 1.06 1.06 Tuming Speed (kh) 14 24 24 14 14 24 24 14 Number of Deteotors 2 1 1 2 1 1 1 1 Detector Template Thru Right Left Thru Left Right Left Right Left Right Left Right Left Right	Peak Hour Factor	1 00	1 00	1 00	1 00	1 00	1 00			
Important (pur) 1000 0.1 111 200 Lane Traffic (%) 1995 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Lane Alignment Left Right Left LNA R NA Median Width(m) 5.0 5.0 3.7 Link Offset(m) 0.0 0.0 0.0 0.0 Too way Left Tum Lane Headway Factor 1.06 1.06 1.06 1.06 1.06 Tuming Speed (k/h) 14 24 24 14 Number of Detectors 2 1 1 2 1 Detector Template Thru Right Left Thru Left Right Leading Detector (m) 0.0 0.0 0.0 0.0 0.0 0.0 Detector 1 Position(m) Do Detector 1 Size(m) Detector 1 Size(m) Size(m) Detector 1 Chanel Detector 1 Chanel Detector 1 Chanel Detector 1 Chanel Dete	Adi Flow (vph)	1595	324	177	948	217	205			
Decode Data Flow (vph) 1595 324 177 948 217 205 Enter Blocked Intersection Yes No No No No No Lane Alignment Left Right Left Left Left Left Left Left LNA R NA Median Width(m) 5.0 5.0 3.7	Shared Lane Traffic (%)	1000	024	111	540	211	200			
Lance of body Fort (vpr) Fost F	Lane Group Flow (vph)	1595	324	177	948	217	205			
Line Alignment Left Ref Link Tite	Enter Blocked Intersection	Yes	No	No	No	No	No			
Landon significant Lon Lon <thlon< th=""> Lon <thlon< th=""></thlon<></thlon<>	Lane Alignment	l eft	Right	Left	Left		RNA			
Indext Multiplier Dot Dot Dot Crosswalk Width(m) 9.0 9.0 9.0 Two way Left Turn Lane	Median Width(m)	5.0	rtigrit	Lon	5.0	37	1110/			
Link Ondol(in) 9.0 0.0 Two way Left Turn Lane	Link Offset(m)	0.0			0.0	0.0				
Orderdar Hear(n) 0.0 0.0 0.0 0.0 Headway Factor 1.06 1.06 1.06 1.06 1.06 Turming Speed (k/h) 14 24 24 14 Number of Detectors 2 1 1 2 1 1 Detector Template Thru Right Left Thru Left Right Leading Detector (m) 93.0 18.6 18.6 93.0 18.6 18.6 18.6 Trailing Detector (m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Detector 1 Size(m) 5.5 18.6 18.6 18.6 18.6 18.6 18.6 Detector 1 Channel Detector 1 Channel	Crosswalk Width(m)	9.0			9.0	9.0				
Headway Factor 1.06 1.06 1.06 1.06 1.06 Turning Speed (k/h) 14 24 24 14 Number of Detectors 2 1 1 2 1 1 Detector Template Thru Right Left Thru Left Right Leading Detector (m) 93.0 18.6 18.6 18.6 18.6 18.6 Trailing Detector (m) 0.0 0.0 0.0 0.0 0.0 0.0 Detector 1 Size(m) 5.5 18.6 18.6 18.6 18.6 18.6 Detector 1 Channel Detector 1 Channel Unit Chies CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Channel 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Detector 1 Channel United Sister	Two way Left Turn Lane	5.0			5.0	5.0				
Index of Teach (kb) 14 24 24 14 Number of Detectors 2 1 1 2 1 1 Detector Template Thru Right Left Thru Left Right Leading Detector (m) 93.0 18.6 18.6 93.0 18.6 18.6 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 Position(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 Position(m) 5.5 18.6 18.6 5.5 18.6 18.6 Detector 1 Channel Detector 1 Delay (s) 0.0 0.0 0.0 0.0 0.0 Detector 2 Position(m) 87.5 5.5 5.5 5.5 5.5 5.5 Detector 2 Extend (s) 0.0 0.0 0.0 1.6 4 1.8 3 8 <td>Headway Eactor</td> <td>1.06</td> <td>1.06</td> <td>1.06</td> <td>1.06</td> <td>1.06</td> <td>1.06</td> <td></td> <td></td> <td></td>	Headway Eactor	1.06	1.06	1.06	1.06	1.06	1.06			
Initial opport (with) If If <thif< th=""> If If <th< td=""><td>Turning Speed (k/h)</td><td>1.00</td><td>1.00</td><td>24</td><td>1.00</td><td>24</td><td>1.00</td><td></td><td></td><td></td></th<></thif<>	Turning Speed (k/h)	1.00	1.00	24	1.00	24	1.00			
Number of Detector Template Thru Right Left Thru Left Right Leading Detector (m) 93.0 18.6 18.6 93.0 18.6 18.6 18.6 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) 5.5 18.6 18.6 5.5 18.6 18.6 Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Extend (s) 0.0 0.0 0.0 0.0 0.0 0.0 Detector 2 New (s) 0.0 0.0 0.0 0.0 0.0 0.0 Detector 2 Position(m) 87.5 87.5 5 5 5 5 Detector 2 Size(m) 5.5 5.5 5 5 5 5 5 Detector 2 Type CI+Ex CI+Ex <td>Number of Detectors</td> <td>2</td> <td>1</td> <td>1</td> <td>2</td> <td>1</td> <td>1</td> <td></td> <td></td> <td></td>	Number of Detectors	2	1	1	2	1	1			
Detector (m) 93.0 18.6 18.6 93.0 18.6 18.6 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 Position(m) 5.5 18.6 18.6 5.5 18.6 18.6 Detector 1 Size(m) 5.5 18.6 18.6 5.5 18.6 18.6 Detector 1 Channel CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Channel	Detector Template	Thru	Right	l eft	Thru	l eft	Right			
Letting Detector (m) 0.0 10.0 10.0 10.0 10.0 Trailing Detector (m) 0.0 0.0 0.0 0.0 0.0 Detector 1 Position(m) 0.0 0.0 0.0 0.0 0.0 Detector 1 Size(m) 5.5 18.6 18.6 5.5 18.6 18.6 Detector 1 Size(m) 5.5 18.6 18.6 5.5 18.6 18.6 Detector 1 Channel	Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6			
Intermine Detector 1 Position(m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Detector 1 Size(m) 5.5 18.6 18.6 5.5 18.6 18.6 Detector 1 Size(m) 5.5 18.6 18.6 18.6 18.6 Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Channel Detector 1 Queue (s) 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 Detector 2 Position(m) 87.5 87.5 87.5 87.5 87.5 97.5 Detector 2 Size(m) 5.5 5.5 5.5 5.5 5.5 5.5 Detector 2 Channel 0.0 0.0 0.0 0.0 1.6 4 1.8 3 8 Permited Phases 2 1 6 4 1.8 3 8 Detector Phase 2 2 1 6 4 1.8 8 8 Detector Phase 2 <t< td=""><td>Trailing Detector (m)</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td></td><td></td><td></td></t<>	Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0			
Detector 1 Nosion(in) 5.0 5.0 6.0 6.0 6.0 Detector 1 Size(m) 5.5 18.6 18.6 5.5 18.6 18.6 Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Channel	Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0			
Detector 1 Type CI+Ex	Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6			
Detector 1 Type 0 N EX 0 N	Detector 1 Type	CI+Ev	CI+Ev	CI+Ev	CI+Ev	CI+Ev	CI+Ev			
Detector 1 Extend (s) 0.0 0.0 0.0 0.0 0.0 Detector 1 Queue (s) 0.0 0.0 0.0 0.0 0.0 Detector 1 Delay (s) 0.0 0.0 0.0 0.0 0.0 Detector 2 Position(m) 87.5 87.5 87.5 Detector 2 Size(m) 5.5 5.5 5.5 Detector 2 Channel Vertex CI+Ex Vertex Detector 2 Extend (s) 0.0 0.0 0.0 10.0 Turn Type NA Perm pm+pt NA Prot pt+ov Protected Phases 2 1 6 4 18 3 8 Permitted Phases 2 2 1 6 4 18 3 8 Detector Phase 2 2 1 6 4 18 3 8 Permitted Phases 2 2 1 6 4 18 3 10.0 10.0 10.0 5.0 3.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Detector 1 Channel									
Detector 1 Queue (s) 0.0 0.0 0.0 0.0 0.0 Detector 1 Delay (s) 0.0 0.0 0.0 0.0 0.0 Detector 2 Position(m) 87.5 87.5 87.5 Detector 2 Size(m) 5.5 5.5 5.5 Detector 2 Channel 0.0 0.0 0.0 Detector 2 Extend (s) 0.0 0.0 0.0 Turn Type NA Perm pm+pt NA Protected Phases 2 1 6 4 1.8 3 Permitted Phases 2 6	Detector 1 Extend (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) 87.5 87.5 87.5 87.5 87.5 Detector 2 Size(m) 5.5 5.5 5.5 5.5 5.5 Detector 2 Channel 0.0 0.0 0.0 0.0 10.0 Detector 2 Extend (s) 0.0 0.0 0.0 10.0 10.0 Turn Type NA Perm pm+pt NA Prot pt+ov Protected Phases 2 1 6 4 1.8 3 8 Permitted Phases 2 2 1 6 4 1.8 3 8 Detector Phase 2 2 1 6 4 1.8 3 8 Permitted Phases 2 2 1 6 4 1.8 3 8 Detector Phase 2 2 1 6 4 1.8 3 10.0 10.0 5.0 3.0 10.0 10.0 10.0 10.0 10.0 10.0	Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Detector 1 Detay (s) 0.0 0.0 0.0 0.0 0.0 Detector 2 Position(m) 87.5 87.5 87.5 Detector 2 Size(m) 5.5 5.5 5.5 Detector 2 Channel 0.0 0.0 0.0 Turn Type NA Perm pm+pt NA Prot pt+ov Protected Phases 2 1 6 4 1.8 3 8 Permitted Phases 2 6	Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Detector 2 Size(m) 5.5 5.5 Detector 2 Type CI+Ex CI+Ex Detector 2 Channel 0.0 Detector 2 Extend (s) 0.0 Turn Type NA Perm pm+pt Protected Phases 2 1 6 4 1.8 3 8 Permitted Phases 2 6	Detector 2 Position(m)	87.5	0.0	0.0	87.5	0.0	0.0			
Detector 2 Type CI+Ex CI+Ex Detector 2 Channel 0.0 Detector 2 Extend (s) 0.0 Turn Type NA Permitted Phases 2 2 6 Detector Phase 2 Switch Phase 2 Minimum Initial (s) 10.0 10.0 5.0 10.0 5.0 10.0 10.0 5.0	Detector 2 Size(m)	5.5			5.5					
Detector 2 Channel On Ex On Ex Detector 2 Extend (s) 0.0 0.0 Turn Type NA Perm pm+pt NA Protected Phases 2 1 6 4 1.8 3 8 Permitted Phases 2 6	Detector 2 Type	CI+Ev			CI+Ev					
Detector 2 Extend (s) 0.0 0.0 Turn Type NA Perm pm+pt NA Prot pt+ov Protected Phases 2 1 6 4 18 3 8 Permitted Phases 2 6	Detector 2 Channel	OFLX								
Detector 2 Extend (s) 0.0 0.0 0.0 Turn Type NA Perm pm+pt NA Protected Phases 2 1 6 4 18 3 8 Permitted Phases 2 6	Detector 2 Extend (s)	0.0			0.0					
Protected Phases 2 1 6 4 18 3 8 Permitted Phases 2 6		0.0	Porm	nm±nt	0.0 NIA	Drot	nt+ov/			
Permitted Phases 2 6 4 10 5 6 Detector Phase 2 2 1 6 4 18 Switch Phase 10.0 10.0 5.0 10.0 5.0 3.0 10.0	Protected Phases	2	Felli	pm+pt 1	NA A	1	1 S	3	8	
Detector Phase 2 2 1 6 4 1 8 Switch Phase	Permitted Phases	2	2	6	0	4	10	5	0	
Switch Phase 2 2 1 0 4 10 Minimum Initial (s) 10.0 10.0 5.0 10.0 3.0 10.0	Detector Phases	2	2	1	6	1	1 Q			
Minimum Initial (s) 10.0 10.0 5.0 10.0 5.0 3.0 10.0	Switch Phase	2	2		U	4	10			
	Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0		3.0	10.0	

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø8	
Minimum Split (s)	31.2	31.2	11.3	31.2	11.3		30.0	16.3	
Total Split (s)	68.0	68.0	16.0	84.0	16.0		30.0	46.0	
Total Split (%)	52.3%	52.3%	12.3%	64.6%	12.3%		23%	35%	
Maximum Green (s)	61.8	61.8	9.7	77.8	9.7		28.0	39.7	
Yellow Time (s)	3.7	3.7	3.3	3.7	3.3		2.0	3.3	
All-Red Time (s)	2.5	2.5	3.0	2.5	3.0		0.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	6.2	6.2	6.3	6.2	6.3				
Lead/Lag	Lag	Lag	Lead		Lag		Lead		
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	None	C-Max	None		None	None	
Walk Time (s)	7.0	7.0		7.0			7.0		
Flash Dont Walk (s)	18.0	18.0		18.0			21.0		
Pedestrian Calls (#/hr)	10	10		10			10		
Act Effct Green (s)	62.2	62.2	80.7	80.8	24.7	55.3			
Actuated g/C Ratio	0.48	0.48	0.62	0.62	0.19	0.43			
v/c Ratio	0.99	0.42	0.83	0.45	0.68	0.32			
Control Delay	27.9	1.9	70.3	11.6	61.9	25.2			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	27.9	1.9	70.3	11.6	61.9	25.2			
LOS	С	А	E	В	E	С			
Approach Delay	23.5			20.8	44.1				
Approach LOS	С			С	D				
Queue Length 50th (m)	114.0	2.9	29.1	39.0	45.6	30.8			
Queue Length 95th (m)	#241.0	m4.8	#72.2	54.6	#121.7	47.2			
Internal Link Dist (m)	70.7			214.7	180.5				
Turn Bay Length (m)		50.0	65.0		70.0	70.0			
Base Capacity (vph)	1605	779	213	2087	318	642			
Starvation Cap Reductn	0	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0	0			
Reduced v/c Ratio	0.99	0.42	0.83	0.45	0.68	0.32			
Intersection Summary									
Area Type:	Other								
Cycle Length: 130									
Actuated Cycle Length: 130									
Offset: 28 (22%), Referenced	to phase 2:E	BT and 6:V	VBTL, Sta	rt of Greei	n				
Natural Cycle: 145									
Control Type: Actuated-Coord	linated								
Maximum v/c Ratio: 0.99									
Intersection Signal Delay: 25.	1			Ir	ntersection	LOS: C			
Intersection Capacity Utilization	on 85.2%			10	CU Level of	Service E			
Analysis Period (min) 15									
# 95th percentile volume exe	ceeds capaci	ty, queue r	nay be lon	ger.					
Queue shown is maximum	atter two cyc	les.							
m Volume for 95th percentile	e queue is me	etered by u	ipstream s	ignal.					
Splits and Phases: 3. Lama	arche & Innes								
							2.0	1	4
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	X	≜1 ⊾		X	≜1 ⊾			4	1		4	
Traffic Volume (vph)	8	1872	131	67	1065	8	88	0	56	4	0	10
Future Volume (vph)	8	1872	131	67	1065	8	88	0	56	4	0	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0	1000	0.0	40.0	1000	0.0	0.0	1000	0.0	0.0	1000	0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	80 0		Ŭ	30.0		Ŭ	20.0		•	20.0		Ŭ
Lane Litil 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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.99	1.00
Frt		0.990			0 999			1.00	0.850		0.00	
Fit Protected	0 950	0.000		0.950	0.000			0.950	0.000		0.001	
Satd Flow (prot)	1712	3353	٥	1712	3300	٥	0	1712	1381	0	1587	0
Elt Permitted	0.2/0	0000	U	0.070	0022	0	U	0.7/8	1001	U	0 020	U
Satd Flow (perm)	1/0	3353	٥	126	3300	٥	٥	13/2	1381	٥	1/181	0
Pight Turn on Red	443	0000	Voc	120	JJZZ	Vac	U	1042	Voc	U	1401	Vos
Sate Flow (PTOP)		12	163		1	163			20		26	163
Link Spood (k/b)		60			60			40	29		20	
Link Dietenee (m)		00			202.0			40			40 62.6	
		230.7			292.0			101.9			02.0 E.C	
Confl Dodo (#/br)		14.5	0	0	17.0		2	13.7			5.0	2
Confl. Peas. (#/nr)			2	2			3					3
Confi. Bikes (#/nf)	4 00	4.00	1 00	4 00	4.00	4 00	4.00	1 00	4 00	4 00	1.00	4.00
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 venicles (%)	1%	2%	1%	1%	4%	1%	1%	1%	12%	1%	1%	1%
Adj. Flow (vpn)	8	1872	131	67	1065	ð	88	0	50	4	0	10
Shared Lane Traffic (%)	0	0000	•	07	4070	•	•	00	50	0		0
Lane Group Flow (vpn)	8	2003	0	6/	1073	0	0	88	50	0	14	0
Enter Blocked Intersection	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA	L NA	Left	R NA
Median Width(m)		5.0			5.0			0.0			0.0	
		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Iwo way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	1.00
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	0	14	24	0	14	24	•	14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	l hru		Left	l hru		Left	Ihru	Right	Left	Ihru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0	18.6	18.6	93.0	
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)	18.6	5.5		18.6	5.5		18.6	5.5	18.6	18.6	5.5	
Detector 1 Type	CI+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)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		8	8	8	4	4	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.1	32.1		35.1	35.1		32.3	32.3	32.3	32.3	32.3	
Total Split (s)	97.0	97.0		97.0	97.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	74.6%	74.6%		74.6%	74.6%		25.4%	25.4%	25.4%	25.4%	25.4%	
Maximum Green (s)	90.9	90.9		90.9	90.9		26.7	26.7	26.7	26.7	26.7	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	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			6.3	6.3		6.3	
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	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	12.0	12.0		12.0	12.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	2	2		1	1		1	1	1	3	3	
Act Effct Green (s)	102.1	102.1		102.1	102.1			15.5	15.5		15.5	
Actuated g/C Ratio	0.79	0.79		0.79	0.79			0.12	0.12		0.12	
v/c Ratio	0.02	0.76		0.68	0.41			0.55	0.29		0.07	
Control Delay	1.9	5.7		47.6	5.5			65.5	31.1		7.4	
Queue Delay	0.0	0.7		0.0	0.0			0.0	0.0		0.0	
Total Delay	1.9	6.4		47.6	5.5			65.5	31.1		7.4	
LOS	A	A		D	A			E	С		A	
Approach Delay		6.4			8.0			52.1			7.4	
Approach LOS	• •	A			A			D			A	
Queue Length 50th (m)	0.1	13.6		5.6	32.7			20.2	5.9		0.0	
Queue Length 95th (m)	m0.2	m24.6		#39.0	64.0			32.7	16.2		2.9	
Internal Link Dist (m)	05.0	214.7		40.0	268.8			127.9			38.6	
Turn Bay Length (m)	05.0	0000		40.0	0000			075	200		204	
Base Capacity (vpn)	352	2636		98	2609			2/5	306		324	
Starvation Cap Reductin	0	296		0	0			0	0		0	
Spiliback Cap Reductin	0	0		0	0			0	0		0	
Storage Cap Reductin	0 02	0 96		0 69	0.41			0 22	0 19		0.04	
Intersection Summary	0.02	0.00		0.00	0.41			0.52	0.10		0.04	
	Other											
Cycle Length: 130	Outer											
Actuated Cycle Length: 130												
Offset: 28 (22%) Referenced t	o nhase 2.E	RTL and 6.	WRTL St	art of Gree	n							
Natural Cycle: 90	0 phase 2.L		WDTE, OU		/1							
Control Type: Actuated-Coordi	nated											
Maximum v/c Ratio: 0.76	natoa											
Intersection Signal Delay: 8.9				In	tersection L	DS: A						
Intersection Capacity Utilization	n 92.6%			10	CU Level of S	ervice F						
Analysis Period (min) 15												
# 95th percentile volume exc	eeds capaci	tv. queue n	nav be lon	aer.								
Queue shown is maximum	after two cvo	les.	,	U ·								

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 473 E of Page & Innes

→ø2 (R)	₽ _{Ø4}	
97 s	33 s	
₩ Ø6 (R)	108 Mar	
97 s	33 s	

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	N	**	≜t ⊾			1
Traffic Volume (vph)	11	1919	1146	19	0	30
Future Volume (vph)	11	1919	1146	19	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	25.0			0.0	0.0	0.0
Storage Lanes	1			0	0	1
Taper Length (m)	55.0				20.0	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.998			0.865
Flt Protected	0.950					
Satd. Flow (prot)	1712	3357	3352	0	0	1559
Flt Permitted	0.950					
Satd. Flow (perm)	1712	3357	3352	0	0	1559
Link Speed (k/h)		60	60		30	
Link Distance (m)		142.1	94.7		74.6	
Travel Time (s)		8.5	5.7		9.0	
Confl. Peds. (#/hr)	5			5		
Confl. Bikes (#/hr)				1		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	3%	1%	1%	1%
Adj. Flow (vph)	11	1919	1146	19	0	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	1919	1165	0	0	30
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	L NA	Left	Left	R NA	L NA	R NA
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		3.0	3.0		9.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	97			97	97	97
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizati	ion 59.3%			IC	U Level of	Service B
Analysis Period (min) 15						