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39 Years

Proposed Residential Development
100 Argyle Avenue, Ottawa
Transportation Impact Assessment

Engineering excellence. Planning progress. Liveable landscapes.

Proposed Residential Development
100 Argyle Avenue

Transportation Impact Assessment

Prepared By:

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

Dated: December 2018
Revised: August 2021

Novatech File: 118116
Ref: R-2018-107

NOVATECH
Engineers, Planners & Landscape Architects

August 13, 2021

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

Attention: Mr. Wally Dubyk
Project Manager, Infrastructure Approvals

Dear Mr. Dubyk:

Reference: 100 Argyle Avenue
Transportation Impact Assessment
Novatech File No. 118116

A Transportation Impact Assessment (TIA) dated December 2018 was prepared in support of a Zoning By-Law Amendment application for the property at 100 Argyle Avenue. We are pleased to submit the following revised TIA in support of a Site Plan Control application for the subject property, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa Transportation Impact Assessment Guidelines (June 2017).

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

Yours truly,

NOVATECH

Joshua Audia, B.Sc.
E.I.T. | Transportation/Traffic

Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

TIA Plan Reports

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

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

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

CERTIFICATION

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

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

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Télécopieur: 613-560-6006

Dated at Ottawa (City) this 13 day of August, 2021 .

Name: Brad Byvelds
(Please Print)

Professional Title: P. Eng. - Project Coordinator

B. Byvelds

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

Office Contact Information (Please Print)	
Address:	240 Michael Cowpland Drive
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Telephone / Extension:	613-254-9643 ext. 286
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TABLE OF CONTENTS

Figures

Tables

Appendices

EXECUTIVE SUMMARY

A Transportation Impact Assessment (TIA) dated December 2018 was prepared in support of a Zoning By-Law Amendment application for the property at 100 Argyle Avenue. This revised TIA has been prepared in support of a Site Plan Control application for the subject property. The approximately 0.16-hectare site is currently occupied by two and a half storeys of commercial offices.

The subject site is surrounded by the following:

- Argyle Avenue and the Canadian Museum of Nature to the north;
- Elgin Street and Ottawa Police Central Headquarters to the east;
- Catherine Street, Highway 417 and Ottawa Police Central Headquarters to the south;
- O'Connor Street, offices and residences to the west.

The subject site is designated as General Urban Area on Schedule B of the City of Ottawa's Official Plan. The implemented zoning for the property is General Mixed Use (GM), which allows 'residential, commercial, and institutional uses, or mixed use development in the General Urban Area.' The subject site is also within the boundaries of the Centretown Community Design Plan and Secondary Plan. A Zoning By-Law Amendment was approved to permit the development as proposed.

The proposed development will replace the existing 2 ½-storey office building with a 12-storey residential building containing 123 dwelling units, amenity space for residents, and 63 underground parking spaces. The development is anticipated to be constructed in a single phase with full occupancy in the year 2023. Access to the proposed development will be provided by a right-in/right-out (RIRO) access to underground parking on Argyle Avenue toward the western limit of the property, a loading access at the east limit, and an existing shared access to the adjacent property to the west.

The study area for this report includes the boundary street Argyle Avenue, and the study area intersections at O'Connor Street/Argyle Avenue, O'Connor Street/Catherine Street, Metcalfe Street West/Argyle Avenue, Metcalfe Street West/Catherine Street/Highway 417 (Exit 119), Elgin Street/ Argyle Avenue, Elgin Street/Catherine Street, Metcalfe Street East/McLeod Street and Metcalfe Street East/Argyle Avenue. This TIA considers the weekday AM and PM peak periods for the buildout year 2023 and the horizon year 2028.

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

Forecasting

- The net increase in trips generated by the proposed development is approximately 25 person trips in the AM peak hour and 27 person trips in the PM peak hour, which includes an increase of approximately three vehicle trips in the AM peak hour and two vehicle trips in the PM peak hour.

Development Design and Parking

- Pedestrian facilities will be provided between the building entrances and Argyle Avenue. Sidewalks will be depressed and continuous across the accesses, in accordance with City standards.

- Transit stops serving OC Transpo Routes 5, 14, 55, 56, and 114 are within 400m walking distance of the subject site. Transit stops serving OC Transpo Routes 6 and 7 are within 600m walking distance of the subject site.

- All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

- A total of 63 vehicle parking spaces and 78 bicycle parking spaces are proposed in two underground parking levels for the development. The amount of vehicle and bicycle parking proposed exceeds the minimum requirements of the City's ZBL.

Boundary Streets

- Argyle Avenue meets the target bicycle level of service (BLOS) D and truck level of service (TkLOS) E, but does not meet the target pedestrian level of service (PLOS) C.

- The south side of Argyle Avenue can achieve the target PLOS C by widening the sidewalk to 1.8m while maintaining a boulevard width of 2.0m. This is identified for the City's consideration as funding becomes available.

Access Design

- The proposed development will be served by a two-way underground parking garage access approximately 4.2m east of the western property line. The existing shared RIRO access will be maintained, but will exclusively serve the adjacent property. An access exclusively for garbage collection and deliveries is located approximately at the eastern property line.

- Section 25 (a) of the *Private Approach By-Law* identifies a requirement for properties with a frontage of 20m to 34m to have no more than one (1) two-way private approach or two (2) one-way private approaches. Considering the loading access will be used exclusively by delivery and garbage collection vehicles, the only exclusive access to 100 Argyle Avenue is the two-way underground parking garage ramp. The shared access must be maintained for the neighbouring property to the west.

- Section 25 (c) of the *Private Approach By-Law* identifies a requirement for two-way accesses to have a width no greater than 9m, as measured at the street line. Section 107 (1)(a) of the ZBL identifies a minimum width requirement of 6.0m for a double traffic lane leading to a parking garage. Any access to an apartment building must also meet Section 107 (1)(aa), which identifies a maximum width requirement of 6.7m for any double traffic lane which leads to 20 or more parking spaces. The proposed underground parking access is approximately 6.0m in width, thereby meeting these requirements.

- The proposed loading access is approximately 5.0m in width, and the shared access with the property to the west is approximately 3.0m in width.

- Section 25 (m) of the *Private Approach By-Law* identifies a requirement to provide a minimum distance of 18m between the private approach and the nearest intersecting street line, and a minimum distance of 15m between a two-way private approach and any other private approach. The proposed spacing between the loading access and the underground parking access is 19m.

- The proposed spacing between the underground parking access and the existing shared access is approximately 2.4m. A relaxation of the minimum distance outlined in Section 25 (m) is requested for the spacing between these two accesses.

- Section 25 (p) of the *Private Approach By-Law* identifies a requirement to provide a minimum spacing of 3m between the nearest edge of the private approach and the property line, as measured at the street line. The spacing between the proposed underground parking access and the western property line is approximately 4.2m, however the spacing between the proposed access and the existing shared access is approximately 2.4m. Section 25 (p) states that a relaxation of the minimum clearance distance from 3m to 0.3m is permissible by the General Manager, provided there are no safety issues associated with doing so.

- Further relaxation of the minimum clearance distance is requested for the loading access, which is proposed to abut the eastern property line. As this access doesn't serve parking, the requirements of the *Private Approach By-Law* are not considered applicable.

- Section 25 (u) of the *Private Approach By-Law* identifies a requirement that any private approach may not exceed a grade of 2% within 9m of the street line. The proposed underground parking access will have a grade of approximately 2% for a distance of 7.5m within the property, where it transitions to a 7% grade. The Transportation Association of Canada (TAC) identifies that the passenger design vehicle has a wheel base of 3.2m and a front bumper overhang of 1.1m. Based on these characteristics, the proposed 2% grade for a distance of 7.5m within the property is sufficient for a standard passenger vehicle to stop entirely within private property with both tires on the 2% grade and have appropriate sight lines to the sidewalk. A waiver of the access grade requirements is requested, as driver sightlines to pedestrians walking along Argyle Avenue will still be adequate.

- Implementation of the underground parking access will require a shift of the two existing on-street parking spaces in front of the subject site, such that the spaces are approximately 7m further east. Removal of the existing site-exclusive access will accommodate this shift, as will the implementation of the loading access at the eastern limit of the site. Based on the parking space dimension regulations outlined by City staff and the *Traffic and Parking By-Law*, two on-street parking spaces can be supported.

- TAC outlines a minimum sight distance requirement of 95m for vehicles exiting the accesses to the subject site. Provided the vegetation proposed at the front of the development is non-obstructive, the sight distance requirement is met for all accesses.

Transportation Demand Management

- The proponent has committed to providing the following TDM measures:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances;
    - Display relevant transit schedules and route maps at entrances;
    - Unbundle parking cost from purchase price or monthly rent;
    - Provide a multimodal travel option information package to new residents.

- In addition to the above measures, the proponent is considering a contract with a provider to install an on-site carshare vehicle.

1.0 INTRODUCTION

A Transportation Impact Assessment (TIA) dated December 2018 was prepared in support of a Zoning By-Law Amendment application for the property at 100 Argyle Avenue. This revised TIA has been prepared in support of a Site Plan Control application for the subject property. The approximately 0.16-hectare site is currently occupied by two and a half storeys of commercial offices.

The proposed development will replace the existing offices with a 12-storey residential building containing 123 units and amenity space for residents. Two levels of underground parking containing a total of 63 spaces have been proposed.

The subject site is surrounded by the following:

- Argyle Avenue and the Canadian Museum of Nature to the north;
- Elgin Street and Ottawa Police Central Headquarters to the east;
- Catherine Street, Highway 417 and Ottawa Police Central Headquarters to the south;
- O'Connor Street, offices and residences to the west.

A view of the subject site and study area is provided in **Figure 1**.

2.0 PROPOSED DEVELOPMENT

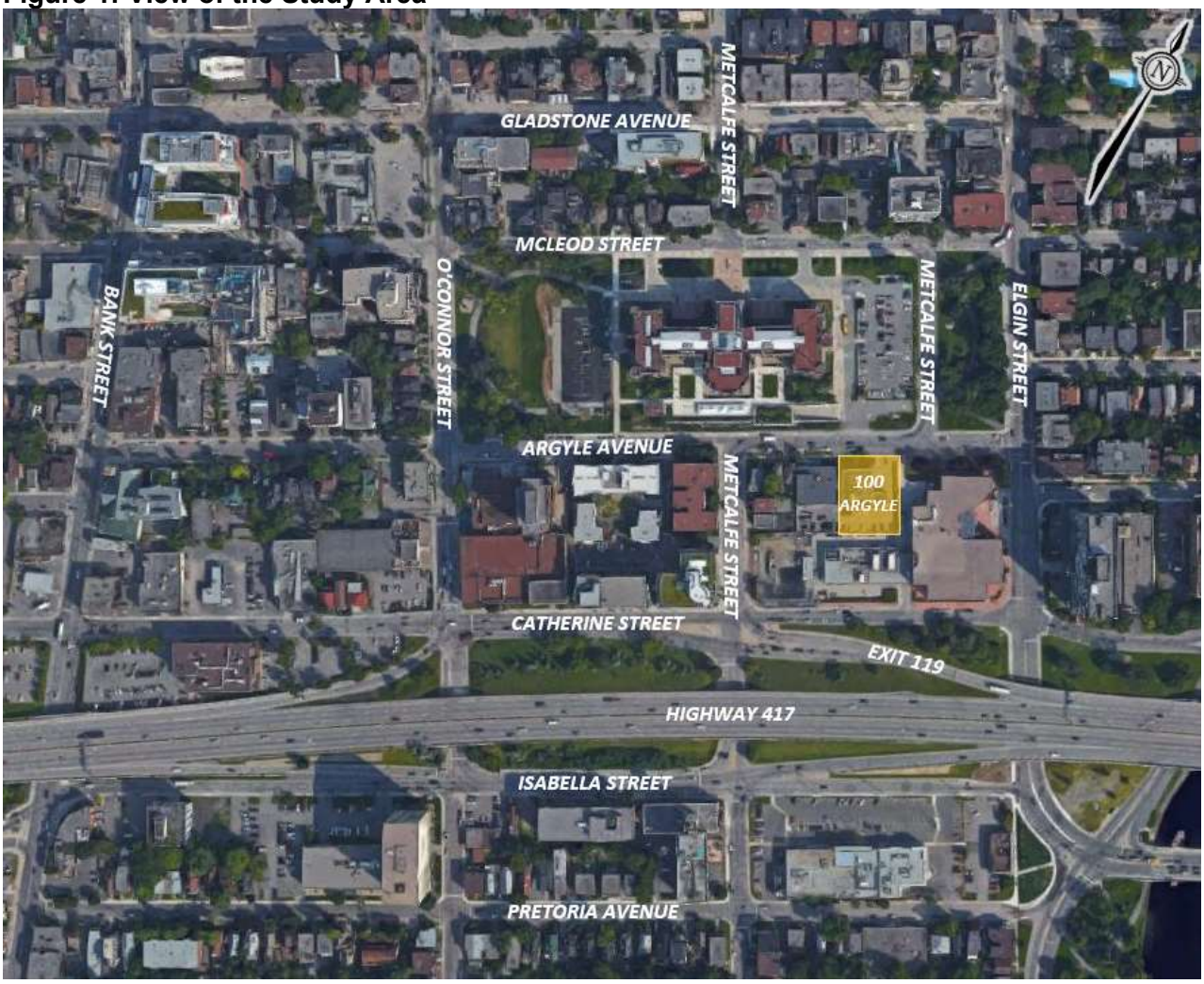
The subject site is designated as General Urban Area on Schedule B of the City of Ottawa's Official Plan. The implemented zoning for the property is General Mixed Use (GM), which allows 'residential, commercial, and institutional uses, or mixed use development in the General Urban Area.' The subject site is also within the boundaries of the Centretown Community Design Plan and Secondary Plan. A Zoning By-Law Amendment was approved to permit the development as proposed.

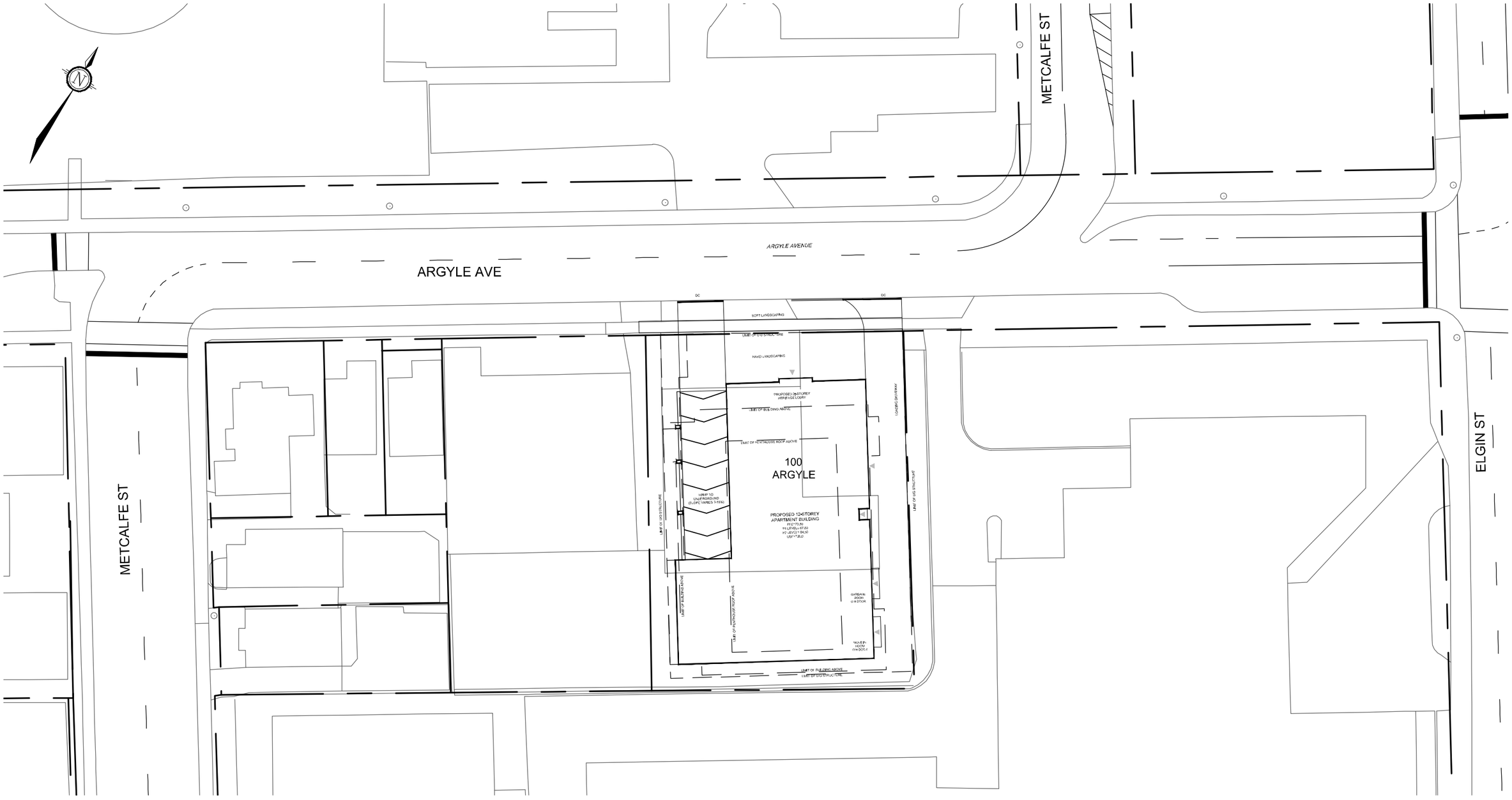
The proposed development will replace the existing 2 ½-storey office building with a 12-storey residential building containing 123 dwelling units, amenity space for residents, and 63 underground parking spaces. The development is anticipated to be constructed in a single phase with full occupancy in the year 2023.

Access to the proposed development will be provided by a right-in/right-out (RIRO) access to underground parking on Argyle Avenue toward the western limit of the property, a loading access at the eastern limit, and an existing shared access to the adjacent property to the west.

A copy of the site plan is included in **Appendix A**. A site plan context figure, which includes details of the boundary streets such as pavement markings and sidewalks, is included in **Figure 2**.

Figure 1: View of the Study Area





NOTES:

1. PROPERTY LINES ARE APPROXIMATED FROM geo OTTAWA.

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100 ARGYLE AVENUE

SITE PLAN CONTEXT

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE AUG 2021 | JOB 118116 | FIGURE FIGURE-2

SHT11X17.DWG 279mmX432mm

M:\2018\118116\CAD\Design\Figures\Traffic\118116-Site Context.dwg, FIGURE 2, Aug 06, 2021 - 2:28pm, jaudia

3.0 SCREENING

3.1 Screening Form

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

- Trip Generation Trigger – The proposed development is not anticipated to generate over 60 person trips/peak hour; further assessment is **not required** based on this trigger.

- Location Triggers – The proposed development is located within the City's 'Downtown Ottawa Urban Design Strategy' Design Priority Area; further assessment is **required** based on this trigger.

- Safety Triggers – The proposed access is within 150m of adjacent traffic signals, and there is a history of traffic collisions on Argyle Avenue between O'Connor Street and Elgin Street; further assessment is **required** based on this trigger.

A copy of the TIA Screening Form is included in **Appendix B**.

4.0 SCOPING

4.1 Existing Conditions

4.1.1 Roadways

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

Argyle Avenue is a generally local roadway that runs on an east-west alignment between Bank Street and the Queen Elizabeth Driveway. Between the two intersections with Metcalfe Street (approximately 120m apart), Argyle Avenue is classified as an arterial roadway. The eastern section of Argyle Avenue (a two-way roadway between Elgin Street and the Queen Elizabeth Driveway) intersects with Elgin Street approximately 15m south of where the western section of Argyle Avenue (a one-way roadway eastbound between Bank Street and Elgin Street) intersects with Elgin Street. Within the study area, Argyle Avenue typically has a two- or three-lane undivided urban cross-section, sidewalks on both sides of the roadway, and an unposted regulatory speed limit of 50 km/h under the Highway Traffic Act. Argyle Avenue is not classified as a truck route. Street parking is permitted except during weekday peak hours (7:00am to 9:00am and 3:30pm to 5:30pm). The right-of-way (ROW) at the subject site is currently 20m. The City of Ottawa's Official Plan does not identify any further ROW protection on Argyle Avenue.

Catherine Street is a one-way arterial roadway in the westbound direction that runs on an east-west alignment between Queen Elizabeth Driveway and Bronson Avenue. West of Metcalfe Street, Catherine Street and Exit 119 of Highway 417 converge, continuing as Catherine Street. West of Bronson Avenue, it continues as the local roadway Raymond Street, before becoming an on-ramp to Highway 417 west of Rochester Street. Within the study area, Catherine Street has a two- to four-lane undivided urban cross-section, sidewalks on the north side of the roadway, and an unposted regulatory speed limit of 50 km/h. Catherine Street is classified as a truck route, allowing full loads.

One-hour street parking is permitted on Catherine Street between Metcalfe Street and Elgin Street on weekdays between 8:00am and 3:30 pm.

O'Connor Street is a one-way arterial roadway in the southbound direction that runs on a north-south alignment between Wellington Street and Isabella Street. South of Isabella Street, O'Connor Street continues as a local roadway until terminating at Holmwood Avenue. Within the study area, O'Connor Street has a two- or three-lane undivided urban cross-section, sidewalks on both sides of the roadway, a bidirectional cycle track on the east side, and an unposted regulatory speed limit of 50 km/h. O'Connor Street is classified as a truck route, allowing full loads. Street parking is permitted north of Argyle Avenue.

Metcalfe Street is generally a one-way arterial roadway in the northbound direction that runs on a north-south alignment in three distinct sections, as a result of the Canadian Museum of Nature's location. South of the museum, Metcalfe Street is a two-way local roadway from Monkland Avenue to Strathcona Avenue. From Strathcona Avenue to Isabella Street, Metcalfe Street is a one-way local roadway, before becoming a one-way arterial roadway between Isabella Street and Wellington Street. Metcalfe Street wraps around the east side of the museum between Argyle Avenue and McLeod Street. Metcalfe Street has a two-lane undivided urban cross-section and an unposted regulatory speed limit of 50 km/h. Within the study area, sidewalks are provided on both sides of the roadway, except between Argyle Avenue and McLeod Street, as there are direct pedestrian connections through the museum site. Metcalfe Street is not classified as a truck route. Within the study area, street parking is not permitted, except for a designated tour bus parking area east of the museum.

McLeod Street is generally a one-way local roadway in the westbound direction that runs on an east-west alignment between Bronson Avenue and the Queen Elizabeth Driveway. Between the two intersections with Metcalfe Street (approximately 125m apart), McLeod Street is classified as an arterial roadway. From Elgin Street to Cartier Street, McLeod Street is a two-way roadway. From Cartier Street to the Queen Elizabeth Driveway, McLeod Street shifts approximately 25m south, and operates as a two-way roadway. Within the study area, McLeod Street has a one- to two-lane undivided urban cross-section, sidewalks on both sides of the roadway, and an unposted regulatory speed limit of 50 km/h. McLeod Street is not classified as a truck route. Street parking is permitted east of the intersection of Metcalfe Street East/McLeod Street and west of the intersection of Metcalfe Street West/McLeod Street.

Elgin Street is a two-way arterial roadway that runs on a north-south alignment between Wellington Street and Isabella Street. At Isabella Street, the roadway transitions into an east-west alignment and continues as Hawthorne Avenue. East of Isabella Street, Hawthorne Avenue is an arterial roadway before becoming a local roadway east of Main Street. Hawthorne Avenue terminates approximately 380m east of Main Street. Within the study area, Elgin Street has a three- to four-lane partially divided urban cross-section, sidewalks on both sides of the roadway, and an unposted regulatory speed limit of 50 km/h. Elgin Street is classified as a truck route, allowing full loads. Street parking is permitted within the study in certain sections, except during weekday peak hours (7:00am to 9:00am and 3:30pm to 5:30pm).

4.1.2 Intersections

O'Connor Street/Argyle Avenue

- Signalized four-legged intersection
- One-way vehicular traffic on O'Connor Street and Argyle Avenue
- North Approach: one shared left turn/through lane and one through lane
- West Approach: one shared through/right turn lane
- Bidirectional cycle tracks on northbound and southbound approaches

O'Connor Street/Catherine Street

- Signalized five-legged intersection
- One-way vehicular traffic on O'Connor Street and Catherine Street
- North Approach: two through lanes, one shared through/right turn lane
- East Approach: one left turn lane, one shared left turn/through lane, and two through lanes
- Westbound left turns on red are prohibited
- Bidirectional cycle tracks on northbound and southbound approaches

Metcalfe Street West/Argyle Avenue

- Signalized three-legged intersection
- One-way traffic on Metcalfe Street West and Argyle Avenue
- South Approach: two right turn lanes
- West Approach: one through lane
- Northbound right turns on red are prohibited

Metcalfe Street/Catherine Street/ Highway 417 (Exit 119)

- Signalized five-legged intersection
- One-way traffic on Metcalfe Street, Catherine Street, and Exit 119
- South Approach: one left turn lane and two through lanes
- Northeast Approach: one through lane and one shared through/right turn lane
- Southeast Approach: two through lanes and two right turn lanes
- Westbound right turns on red are prohibited

Metcalfe Street East/McLeod Street

- Unsignalized three-legged intersection
- One-way traffic on Metcalfe Street East and McLeod Street
- South Approach: two left turn lanes with a PXO Type 'B'
- East Approach: one through lane, stop controlled

Metcalfe Street East/Argyle Avenue

- Unsignalized three-legged intersection
- One-way traffic on Metcalfe Street East and Argyle Avenue
- West Approach: one left turn lane and one shared left turn/through lane

Elgin Street/Argyle Avenue

- Signalized three-legged intersection
- One-way traffic on Argyle Avenue
- North Approach: one through lane
- South Approach: two through lanes
- West Approach: two left turn lanes and one right turn lane

Elgin Street/Catherine Street

- Signalized four-legged intersection
- One-way traffic on Catherine Street
- North Approach: one through lane and one shared through/right turn lane
- South Approach: one shared left turn/through lane and one through lane
- East Approach: one shared left turn/through lane and one right turn lane

4.1.3 Driveways

In accordance with the City's *2017 TIA Guidelines*, a review of driveways on the boundary streets within 200m of the proposed accesses is provided as follows:

Argyle Avenue, North Side:

- One driveway to the museum at 240 McLeod Street

Argyle Avenue, South Side:

- Seven driveways to residences at 464 Metcalfe Street, and 114, 116, 122 & 150 Argyle Avenue
- One driveway to businesses at 110 Argyle Avenue
- One police station access at 474 Elgin Street

4.1.4 Pedestrian and Cycling Facilities

Concrete and/or unit paver sidewalks are provided on both sides of Argyle Avenue, O'Connor Street, Metcalfe Street, and Elgin Street, and one side of Catherine Street. A bidirectional cycle track is provided on O'Connor Street.

In the City of Ottawa's primary cycling network, O'Connor Street is classified as a Spine Route and Cross-Town Bikeway, Elgin Street is classified as a Local Route, Argyle Avenue is classified as a Spine Route between O'Connor Street and the southern section of Metcalfe Street, and Metcalfe Street is classified as a Spine Route south of Argyle Avenue.

4.1.5 Area Traffic Management

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

4.1.6 Transit

The nearest bus stops to the subject site are as follows:

Elgin Street
- Stop #2472 – for routes 5, 14, and 114
  (located at the northwest corner of Elgin Street/Gladstone Avenue)
- Stop #7671 – for route 14 and 114
  (located at the southwest corner of Elgin Street/Gladstone Avenue)
- Stop #2468 – for route 5
  (located at the southeast corner of Elgin Street/McLeod Street)
- Stop #2473 – for route 5
  (located at the southwest corner of Elgin Street/McLeod Street)
- Stop #2466 – for route 5
  (located at the southeast corner of Elgin Street/Argyle Avenue)
- Stop #2476 – for route 5
  (located at the northwest corner of Elgin Street/Catherine Street)

Metcalfe Street
- Stop #2428 – for route 56
  (located at the northeast corner of Metcalfe Street/Pretoria Avenue)
- Stop #7628 – for route 56
  (located at the northwest corner of Metcalfe Street/Pretoria Avenue)

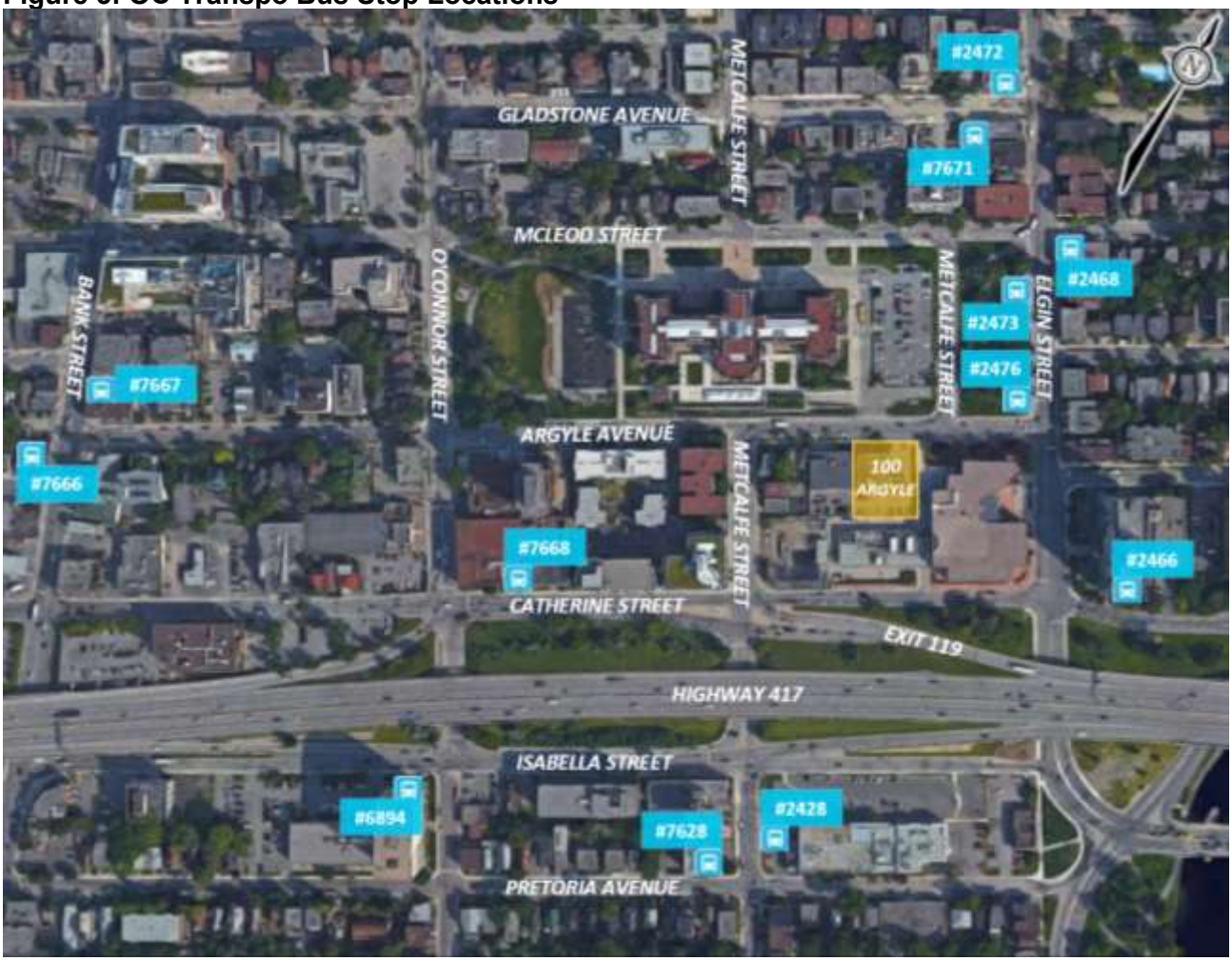
O'Connor Street
- Stop #6894 – for routes 55
  (located at the southwest corner of O'Connor Street/Isabella Street)
- Stop #7668 – for route 55
  (located at the northeast corner of O'Connor Street/Catherine Street)

Bank Street

- Stop #7666 – for routes 6 and 7
  (located between Argyle Avenue and Arlington Avenue)
- Stop #7667 – for routes 6 and 7
  (located between Argyle Avenue and Flora Street)

Locations of these bus stops are shown in **Figure 3**.

Figure 3: OC Transpo Bus Stop Locations



OC Transpo Route 5 travels between Billings Bridge Station and Rideau Centre. On weekdays, the route operates every 15 to 30 minutes from 6:00am to 12:00am. On weekends, the route operates every 30 minutes from 7:00am to 12:00am.

OC Transpo Route 6 travels between Rockcliffe and Greenboro Station. On weekdays, the route operates every 15 to 30 minutes from 5:00am to 2:00am. On weekends, the route operates every 10 to 30minutes from 7:00am to 2:00am.

OC Transpo Route 7 travels between St. Laurent Station and Carleton University. On weekdays, the route operates every 10 to 30 minutes from 4:30am to 1:30am. On weekends, the route operates every 15 to 30 minutes from 7:00am to 12:30am.

OC Transpo Route 14 travels between St. Laurent Station and Tunney's Pasture. On weekdays, the route operates every 15 to 30 minutes from 6:00am to 1:00am. On weekends, the route every 30 to 60 minutes from 7:00am to 12:30am.

OC Transpo Route 55 travels between Elmvale Acres Shopping Centre and Bayshore Station. On weekdays, the route operates every 15 to 30 minutes from 5:00am to 1:00am. On weekends, the route every 30 minutes from 5:30am to 1:00am.

OC Transpo Route 56 travels between King Edward/Union and Tunney's Pasture Station. On weekdays, the route operates every 15 to 30 minutes from 6:00am to 7:00pm. This route does not operate on weekends.

OC Transpo Route 114 travels between Rideau Station and Carlington Park. On weekdays, the route is scheduled to stop within the study area at 9:54am, 10:54am, 1:38pm, and 2:38pm. The route does not operate on weekends.

OC Transpo maps for the routes outlined above and a portion of the OC Transpo System Map are included in **Appendix C**.

4.1.7 Existing Traffic Volumes

Weekday traffic counts completed by the City of Ottawa were used to determine the existing pedestrian, cyclist and vehicular traffic volumes at the study area intersections. The traffic counts were completed on the following dates:

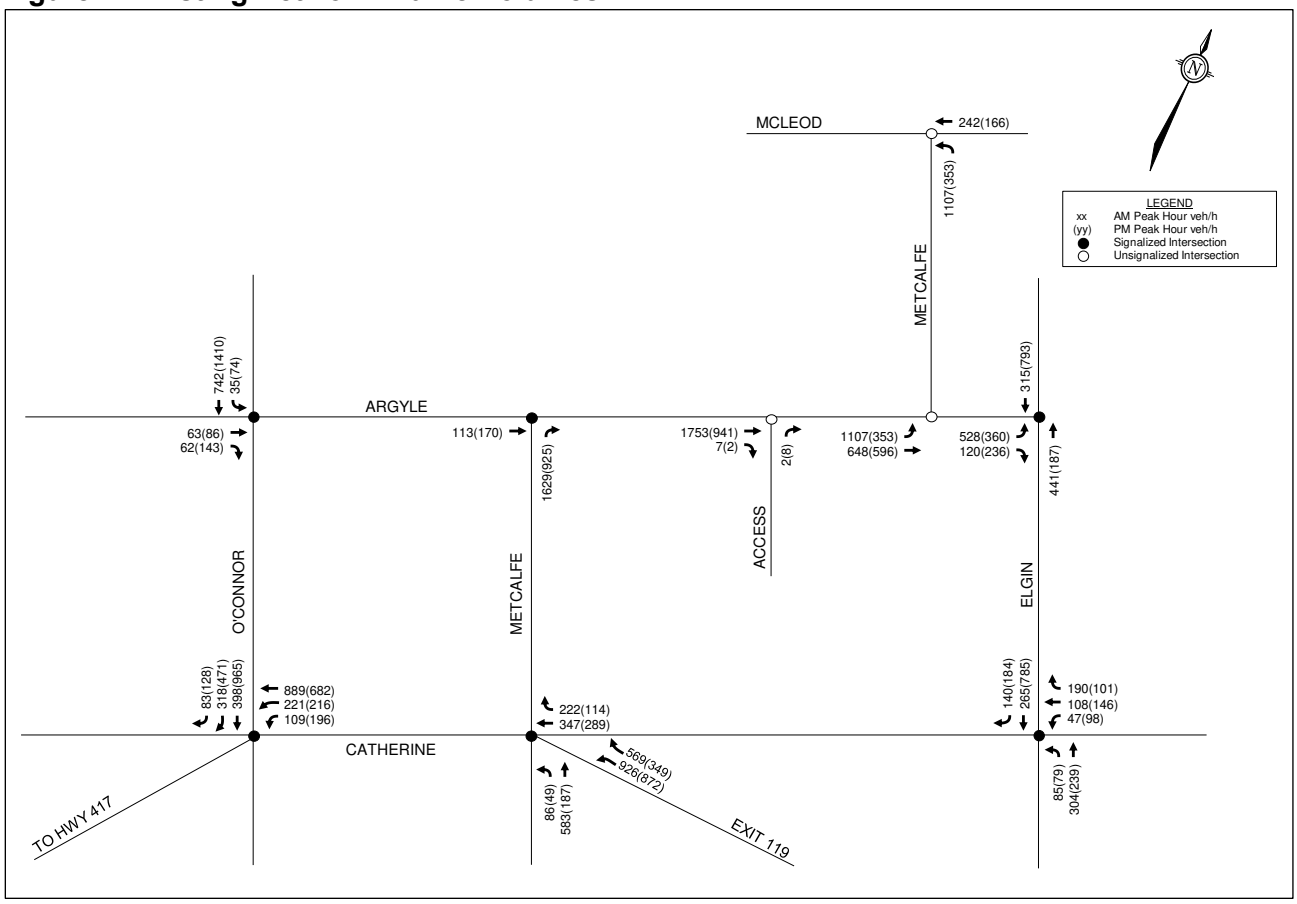
- O'Connor Street/Argyle Avenue — March 21, 2017
- O'Connor Street/Catherine Street — March 21, 2017
- Metcalfe Street West/Argyle Avenue — April 19, 2018
- Metcalfe Street West/Catherine Street/Highway 417 (Exit 119) — November 26, 2019
- Metcalfe Street East/McLeod Street — April 13, 2010
- Elgin Street/Argyle Avenue — May 11, 2016
- Elgin Street/Catherine Street — April 19, 2017

The average annual daily traffic (AADT) of Argyle Avenue at the subject site is 13,980 vehicles/day. The traffic volumes at Metcalfe Street East/Argyle Avenue have been estimated based on the volumes observed at Metcalfe Street East/McLeod Street and Elgin Street/Argyle Avenue.

Comparing the 2010 count of Metcalfe Street East/McLeod Street to the 2017 count at the downstream intersection of Metcalfe Street West/McLeod Street, the 2010 volumes are approximately 60 vehicles higher in the AM peak (4% higher), 45 vehicles higher in the midday peak (8% higher), and 45 vehicles lower in the PM peak (8% lower).Therefore, the traffic count conducted at Metcalfe Street East/McLeod Street is considered to be representative despite being more than five years old.

Traffic count data is included in **Appendix D**. Traffic volumes within the study area are shown in **Figure 4**.

Figure 4: Existing Network Traffic Volumes



4.1.8 Collision Records

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

The collision data has been evaluated to determine if there are any identifiable collision patterns. The number of collisions at each intersection from January 1, 2015 to December 31, 2019 is summarized in **Table 1**.

Table 1: Reported Collisions

Intersection	Impact Types					Total
	Rear End	Turning	Sideswipe	Angle	SMV(1)/ Other	
O'Connor Street/ Argyle Avenue	2	6	7	7	4	**26**
O'Connor Street/ Catherine Street	16	5	25	22	7	**75**
Metcalfe Street West/ Argyle Avenue	-	-	3	-	1	**4**
Metcalfe Street West/Catherine Street/Highway 417 (Exit 119)	13	4	14	9	4	**44**
Metcalfe Street East/ McLeod Street	2	-	-	-	-	**2**
Metcalfe Street East/ Argyle Avenue	-	-	-	-	-	**0**
Elgin Street/ Argyle Avenue	2	2	2	1	2	**9**
Elgin Street/ Catherine Street	4	5	3	5	1	**18**

1. SMV: Single Motor Vehicle

O'Connor Street/Argyle Avenue

A total of 26 collisions were reported at this intersection over the last five years, of which there were two rear-end impacts, six turning movement impacts, seven sideswipe impacts, seven angle impacts, and four single-vehicle/other impacts. Five of the collisions caused injuries, but none caused fatalities. Four of the collisions involved cyclists, and one involved a pedestrian.

All six turning movement impacts involved southbound left turning vehicles, and three of the impacts involved cyclists. Two of the six impacts occurred in poor driving conditions. All three of the cyclist impacts have occurred since the implementation of the bidirectional cycle tracks on O'Connor Street, and involved southbound cyclists. There are multiple signs indicating that left turning traffic must yield to cyclists.

As O'Connor Street and Argyle Avenue are both one-way streets, all seven angle impacts involved a southbound vehicle and an eastbound vehicle. Two of the seven impacts occurred in poor driving conditions.

O'Connor Street/Catherine Street

A total of 75 collisions were reported at this intersection over the last five years, of which there were 16 rear-end impacts, five turning movement impacts, 25 sideswipe impacts, 22 angle impacts, and seven single-vehicle/other impacts. Nine of the collisions caused injuries, but none caused fatalities. None of the collisions involved cyclists, and one involved a pedestrian.

Of the 16 rear-end impacts, seven occurred at the southbound approach (six through vehicle incidents and one right turn incident) and nine occurred at the westbound approach (all through vehicle incidents). Eight of the 16 impacts occurred in poor driving conditions.

Of the 25 sideswipe impacts, six occurred at the southbound approach and 19 occurred at the westbound approach. Nine of the 25 impacts occurred in poor driving conditions. Most of these impacts are attributable to lane changes. Weaving is likely present at both approaches, as drivers have limited space and time to enter the correct lane for their route.

As O'Connor Street and Catherine Street are both one-way streets, all 22 angle impacts involved a southbound vehicle and a westbound vehicle. Ten of the 22 impacts occurred in poor driving conditions. Southbound and westbound traffic have limited visibility of one another, as the Taggart Family YMCA/YWCA is approximately 3.5m from the edge of O'Connor Street and 6.5m from the edge of Catherine Street. The unusual geometry of the intersection may have also had a role in these collisions.

Of the seven single-vehicle/other impacts, one involved a pedestrian. Five impacts involved a southbound vehicle and two impacts involved a westbound vehicle. Five of the seven impacts occurred in poor driving conditions.

Metcalfe Street West/Argyle Avenue
A total of four collisions were reported at this intersection over the last five years, of which there were three sideswipe impacts and one single-vehicle/other impact. Two of the collisions caused injuries, but none caused fatalities. Two of the four collisions occurred in poor driving conditions. One of the collisions involved a cyclist, and none involved pedestrians.

Metcalfe Street West/Catherine Street/Highway 417 (Exit 119)
A total of 44 collisions were reported at this intersection over the last five years, of which there were 13 rear-end impacts, four turning movement impacts, 14 sideswipe impacts, nine angle impacts, and four single-vehicle/other impacts. Four of the collisions caused injuries, but none caused fatalities. None of the collisions involved cyclists, and one involved a pedestrian.

All 13 rear-end impacts involved westbound through vehicles. Five of the 13 impacts occurred in poor driving conditions. Given that most westbound traffic comes from the approach exiting Highway 417, the majority of these impacts are likely from the exit as well.

Of the 14 sideswipe impacts, three occurred at the northbound approach and 11 occurred at the westbound approaches. Six of the 14 impacts occurred in poor driving conditions. Most of these impacts are attributable to lane changes and overtaking.

As Metcalfe Street, Catherine Street, and Exit 119 are all one-way roadways, all nine angle impacts involved a northbound vehicle and a westbound vehicle. Three of the 14 impacts occurred in poor driving conditions. Visibility of the westbound approaches from the northbound approach is obstructed by vegetation and a slope up to the Highway 417 overpass. The unusual geometry of this intersection may have also had a role in these collisions.

Of the four single-vehicle/other impacts, one involved a pedestrian. This impact also occurred in poor driving conditions.

Metcalfe Street East/McLeod Street
Two collisions were reported at this intersection over the last five years, both rear-end impacts in good driving conditions. Neither collision caused injuries.

Elgin Street/Argyle Avenue
A total of nine collisions were reported at this intersection over the last five years, of which there were two rear-end impacts, two turning movement impacts, two sideswipe impacts, one angle impact, and two single-vehicle/other impacts. Two collisions caused injuries, but neither caused fatalities. One of the nine collisions occurred in poor driving conditions. One of the collisions involved a cyclist, and one involved a pedestrian.

Elgin Street/Catherine Street
A total of 18 collisions were reported at this intersection over the last five years, of which there were four rear-end impacts, five turning movement impacts, three sideswipe impacts, five angle impacts, and one single-vehicle/other impact. Seven of the collisions caused injuries, but none caused fatalities. Eleven of the collisions occurred in poor driving conditions. None of the collisions involved cyclists or pedestrians.

4.2 Planned Conditions

The City of Ottawa's 2013 Transportation Master Plan (TMP) does not identify any upcoming roadway projects within the study area in its Affordable Road Network. The Rapid Transit and Transit Priority (RTTP) Network identifies Elgin Street in its Affordable Network and Catherine Street/Chamberlain Avenue/Isabella Street in its 2031 Network Concept as Transit Priority Corridors with Isolated Measures. On Elgin Street, transit signal priority will be implemented between Gladstone Avenue and Wellington Street to reduce travel time and delay for OC Transpo Route 5, 6, and 14. Transit signal priority will also be implemented on Catherine Street/Chamberlain Avenue/Isabella Street to improve the reliability of transit trips which bypass downtown between Bronson Avenue and Lees Station.

The 2013 Ottawa Cycling Plan identifies the dedication of segregated cycling facilities, shared lanes, and multi-use pathways on O'Connor Street between Wellington Street and Holmwood Avenue. The facilities are listed as a Phase 1 (2016-2021) project. The section within the study area is complete.

Reconstruction of Elgin Street was recently completed between Gloucester Street and Isabella Street. The road modifications associated with the Elgin Street Renewal included lane reductions in favour of wider sidewalks, shared use lanes for cyclists and vehicles, transit facilities (such as bus pads or shelters), and traffic calming measures (such as 30 km/h speed limits and raised intersections at select locations).

4.3 Study Area and Time Periods

The study area for this report includes the boundary street Argyle Avenue, and the study area intersections at O'Connor Street/Argyle Avenue, O'Connor Street/Catherine Street, Metcalfe Street West/Argyle Avenue, Metcalfe Street West/Catherine Street/Highway 417 (Exit 119), Elgin Street/ Argyle Avenue, Elgin Street/Catherine Street, Metcalfe Street East/McLeod Street and Metcalfe Street East/Argyle Avenue.

A review of Saturday counts at Metcalfe Street West/Catherine Street/Highway 417 (Exit 119) was conducted to identify if analysis of the Saturday peak hour was warranted. Within the study area, Metcalfe Street is the only connection from Highway 417 to Argyle Avenue. Additionally, weekday counts at Metcalfe Street West/Argyle Avenue indicate that Metcalfe Street carries approximately 85-90% of the traffic at this intersection, while Argyle Avenue carries the other 10-15%.

For these reasons, reviewing Metcalfe Street West/Catherine Street/Highway 417 for Saturday volumes can be considered representative of the study area overall. Based on the 2015 Saturday and 2019 weekday counts, the total traffic volumes at all approaches are:

- 2,733 vehicles during the AM peak hour;
- 1,860 vehicles during the PM peak hour;
- 1,888 vehicles during the Sat peak hour.

Looking only at vehicles departing the intersection north on Metcalfe Street West, the volumes are:

- 1,374 vehicles during the AM peak hour;
- 650 vehicles during the PM peak hour;
- 499 vehicles during the Sat peak hour.

Therefore, 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. The proposed development is expected to be completed with full occupancy by the year 2023. As such, this TIA considers the weekday AM and PM peak periods for the buildout year 2023 and the horizon year 2028.

4.4 Exemptions Review

This module reviews possible exemptions from the final Transportation Impact Assessment, as outlined in the *2017 TIA Guidelines*. The applicable exemptions for this site are shown in **Table 2**.

Table 2: TIA Exemptions

Module	Element	Exemption Criteria	Status
Design Review Component			
4.1 Development Design	*4.1.2* Circulation and Access	• Only required for site plans	Not Exempt
	4.1.3 New Street Networks	• Only required for plans of subdivision	Exempt
4.2 Parking	*4.2.1* Parking Supply	• Only required for site plans	Not Exempt
	4.2.2 Spillover Parking	• Only required for site plans where parking supply is 15% below unconstrained demand	Exempt
Network Impact 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	Not Exempt
4.6 Neighbourhood Traffic Management	*4.6.1* Adjacent Neighbourhoods	• Only required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds	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

As the proposed development does not meet the trip generation trigger, the TIA report is limited to the Design Review components, along with the Transportation Demand Management module. Therefore, the following modules will be included in the TIA report:

- Module 4.1: Development Design
- Module 4.2: Parking
- Module 4.3: Boundary Streets
- Module 4.4: Access Design
- Module 4.5: Transportation Demand Management

5.0 FORECASTING

5.1 Development-Generated Travel Demand

Currently, the subject site is occupied by a 2 ½-storey office building, with a total gross floor area of approximately 17,700 ft^2 (approximated using aerial photography). Trips generated by the existing office building have been estimated using the rates outlined in the *ITE Trip Generation Manual, 10th Edition* for the General Office Building land use. While it is acknowledged that the City prefers to estimate traffic volumes at existing developments by conducting traffic counts versus the use of forecasting projections, it is Novatech's position that conducting a count for a development of this size is not cost effective. Using the *ITE Trip Generation Manual* to estimate the number of trips generated by the existing site represents a valid and conservative approach. The person trips generated by the existing development are summarized in **Table 3**.

Table 3: Existing Office – Peak Hour Trip Generation

Land Use	ITE Code	GFA	AM Peak (pph[1])			PM Peak (pph)		
			IN	OUT	TOT	IN	OUT	TOT
General Office Building	710	17,700 ft^2	23	4	*27*	4	24	*28*

1. pph: Person Trips Per Hour – Calculated using an ITE Trip to Person Trip factor of 1.28, consistent with the *2017 TIA Guidelines*

The modal shares for the existing development are assumed to be consistent with the modal shares outlined in the *2011 TRANS O-D Survey Report*, specific to the Ottawa Inner Area region. The modal share values applied to the existing offices are based on all observed trips to/within the Ottawa Inner Area in the AM peak hour, and all observed trips from/within the Ottawa Inner Area in the PM peak hour. A full breakdown of the existing office trips by modal share is shown in **Table 4**.

Table 4: Existing Office – Peak Hour Trips by Mode Share

Travel Mode	Mode Share	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOT	IN	OUT	TOT
Peak Hour Person Trips		**23**	**4**	***27***	**4**	**24**	***28***
Auto Driver	35%	7	2	*9*	2	8	*10*
Auto Passenger	10%	3	0	*3*	0	3	*3*
Transit	30%	7	1	*8*	1	7	*8*
Cyclist	5%	1	0	*1*	0	1	*1*
Pedestrian	20%	5	1	*6*	1	5	*6*

From the previous tables, the existing offices are estimated to generate 27 person trips (including nine vehicle trips) during the AM peak hour, and 28 person trips (including ten vehicle trips) during the PM peak hour.

The proposed development will include 126 residential units, along with amenities for residents (which are not anticipated to generate any external trips). The previous TIA prepared by Novatech in December 2018 in support of the Zoning By-Law Amendment application estimated the number of site-generated trips using the 2009 TRANS Trip Generation Manual, prepared by McCormick Rankin Corporation. Since the previous TIA, the City has developed the 2020 *TRANS Trip Generation Manual*, prepared by WSP. The manual includes data to estimate the trip generation and mode shares for residential uses, divided into single-family detached housing, low-rise multifamily housing (one or two storeys), and high-rise multifamily housing (three or more storeys). For the purposes of this analysis, trips generated by the proposed residential units during the AM and PM peak hours have been estimated using the recommended rates from the 2020 *TRANS Trip Generation Manual*.

The *TRANS Trip Generation Manual* identifies the subject site as being located within the Ottawa Inner Area district, which has the following observed mode shares during the peak hours.

AM Peak Hour
- Auto Driver: 26%
- Auto Passenger: 6%
- Transit: 28%
- Cyclist: 5%
- Pedestrian: 35%

PM Peak Hour
- Auto Driver: 25%
- Auto Passenger: 8%
- Transit: 21%
- Cyclist: 6%
- Pedestrian: 40%

The assumed modal shares for the development have been taken as the average of the TRANS AM and PM peak hour modal shares. The estimated number of trips generated by the proposed residential units during peak periods are shown in **Table 5** and **Table 6**.

Table 5: Proposed Residential – Peak Period Trip Generation

Land Use	TRANS Rate	Units	AM Peak (ppp[1])			PM Peak (ppp)		
			IN	OUT	TOT	IN	OUT	TOT
High-Rise Multifamily Housing	AM: 0.80 PM: 0.90	123	30	68	*98*	64	47	*111*

1. ppp: Person Trips per Peak Period

Table 6: Proposed Residential – Peak Period Trips by Mode Share

Travel Mode	Mode Share	AM Peak Period			PM Peak Period		
		IN	OUT	TOT	IN	OUT	TOT
Peak Period Person Trips		**30**	**68**	***98***	**64**	**47**	***111***
Auto Driver	25%	8	17	*25*	16	12	*28*
Auto Passenger	10%	3	7	*10*	6	5	*11*
Transit	25%	7	17	*24*	16	12	*28*
Cyclist	5%	2	3	*5*	3	2	*5*
Pedestrian	35%	10	24	*34*	23	16	*39*

Table 4 of the *TRANS Trip Generation Manual* includes adjustment factors to convert the estimated number of trips generated for each mode from peak period to peak hour. A breakdown of the peak hour trips by mode is shown in **Table 7**.

Table 7: Proposed Residential – Peak Hour Trips by Mode Share

Travel Mode	Adj. Factor		AM Peak Hour			PM Peak Hour		
	AM	PM	IN	OUT	TOT	IN	OUT	TOT
Auto Driver	0.48	0.44	4	8	*12*	7	5	*12*
Auto Passenger	0.48	0.44	1	3	*4*	3	2	*5*
Transit	0.55	0.47	4	9	*13*	8	6	*14*
Cyclist	0.58	0.48	1	2	*3*	2	1	*3*
Pedestrian	0.58	0.52	6	14	*20*	12	9	*21*
Peak Hour Person Trips			**16**	**36**	***52***	**32**	**23**	***55***

From the previous table, the proposed high-rise dwellings are estimated to generate 52 person trips (including 12 vehicle trips) during the AM peak hour, and 55 person trips (including 12 vehicle trips) during the PM peak hour.

Comparing the estimates of **Table 4** and **Table 7**, the proposed development is anticipated to generate a net increase of 25 person trips (including an additional three vehicle trips) during the AM peak hour, and a net increase of 27 person trips (including an additional two vehicle trips) during the PM peak hour.

5.2 Background Traffic

5.2.1 Other Area Development

The City of Ottawa's Development Application Search Tool identifies that near the subject site, five development applications are approved or in the approval process. Transportation Overviews were completed for the following developments:

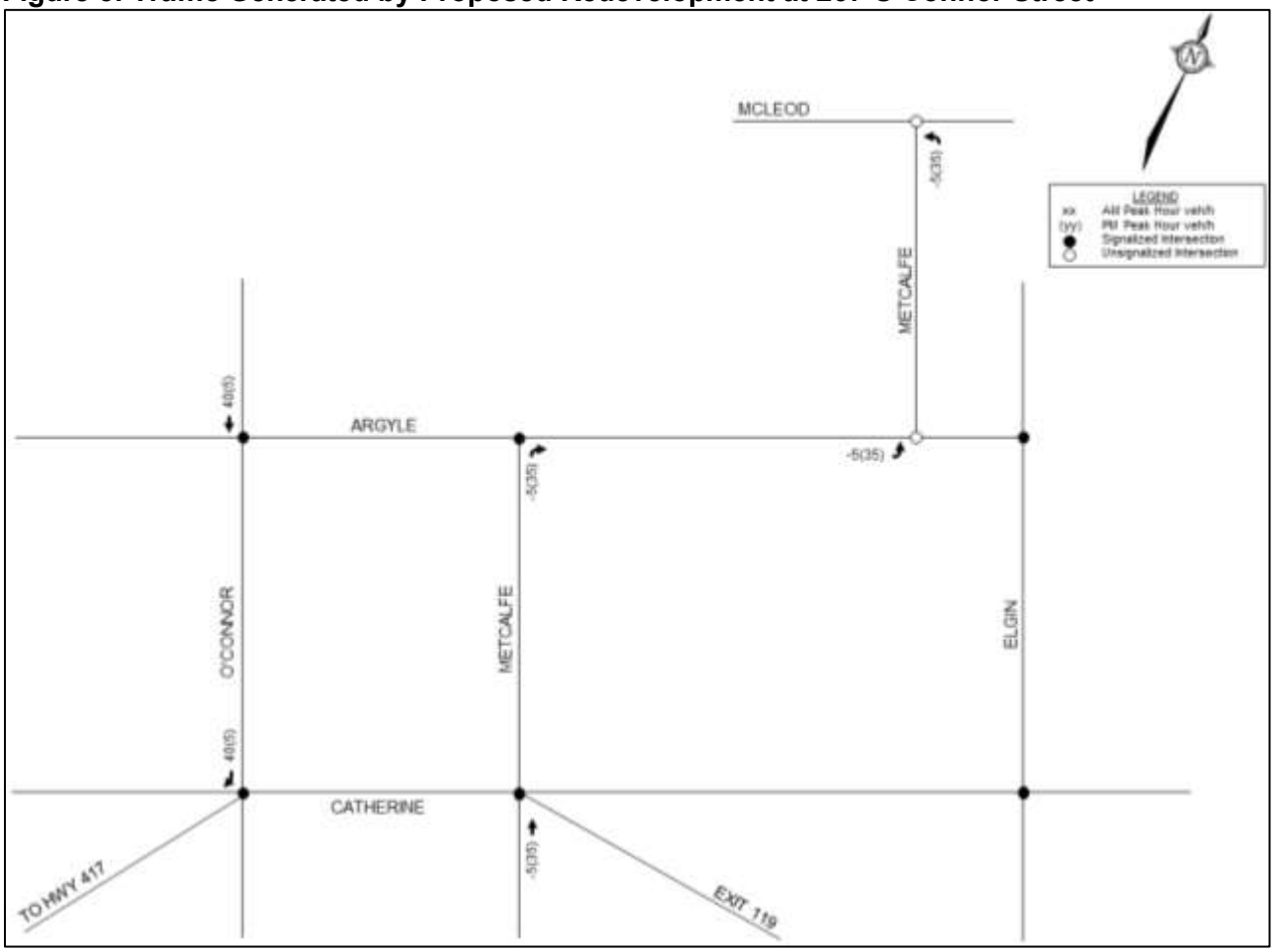
- 141 Isabella Street (Smart Property Advisors, March 2014)
- 215 McLeod Street (exp, August 2012)
- 320 McLeod Street (Delcan, May 2013)
- 500 Bank Street (Parsons, July 2014)

In each case, the number of trips generated were considered to be insignificant, and no analysis was performed. Similarly, these developments will not be accounted for in the analysis of this application.

A Transportation Brief was completed by Parsons in May 2014 for a proposed redevelopment at 267 O'Connor Street, which would replace the existing office building with a high-rise condominium building with ground-floor retail. The projected net increase in traffic generated by the redevelopment was approximately 58 vph in the AM peak hour and 66 vph in the PM peak hour. Outbound trips taking O'Connor Street and inbound trips taking Metcalfe Street have been added to the background traffic.

Trips generated by the proposed redevelopment at 267 O'Connor Street are shown in **Figure 5**. Relevant excerpts of the brief are included in **Appendix F**.

Figure 5: Traffic Generated by Proposed Redevelopment at 267 O'Connor Street



5.2.2 General Background Growth Rate

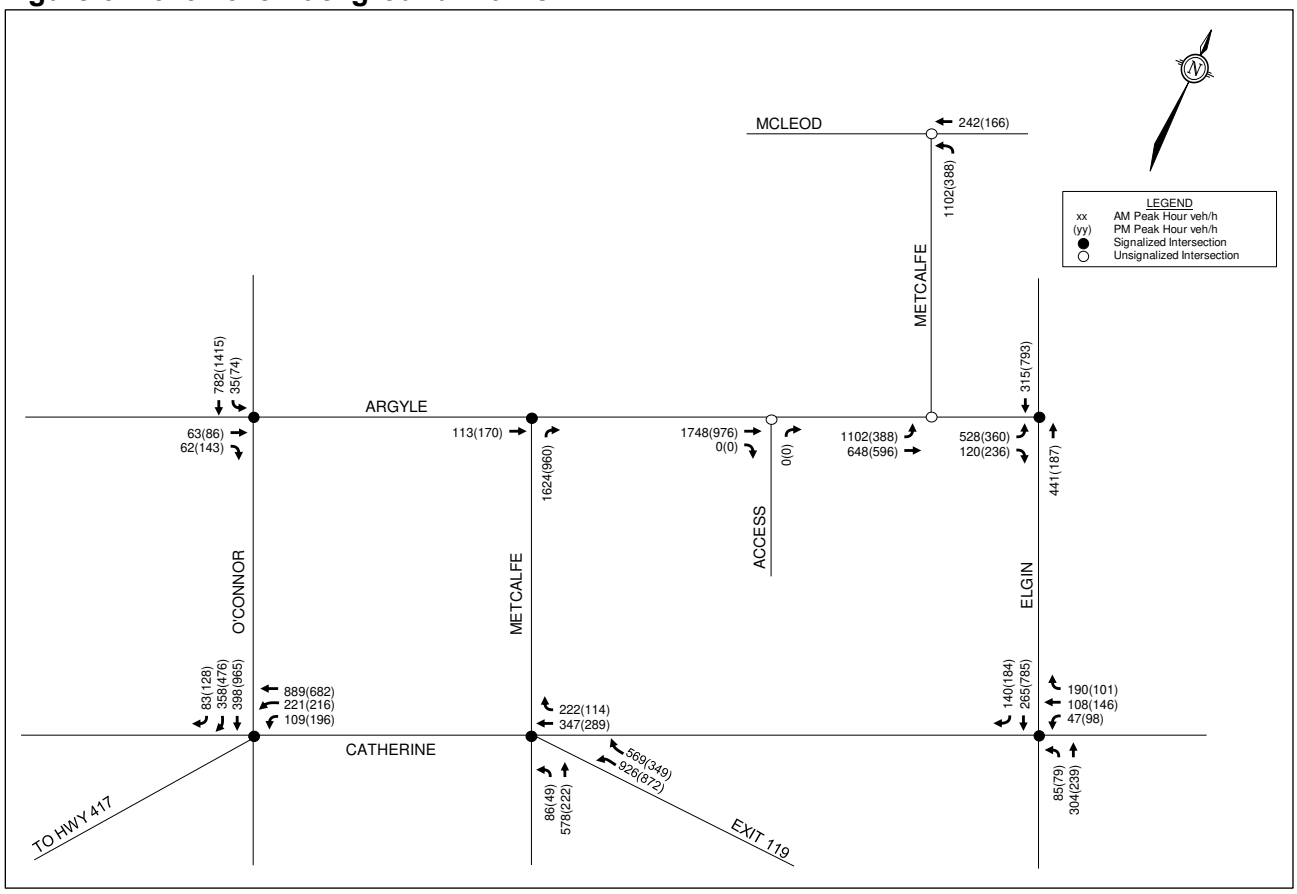
A rate of background growth has been established through a review of the city of Ottawa's Strategic Long Range Model (comparing snapshots of 2011 and 2031 AM peak volumes), as well as historic traffic counts at Metcalfe Street West/Argyle Avenue. On the roadways within and around the study area, the snapshots suggest a growth rate between -1% and +1% per annum. The historic traffic counts at Metcalfe Street West/Argyle Avenue are similarly inconsistent, showing an increase in volumes between 2015 and 2017, but a decrease between 2017 and 2018.

The City's 2013 TMP projects a 20% growth in population within the 'Inner Area' of Ottawa between 2011 and 2031, equating to a growth rate of approximately 1% per annum. The TMP also outlines transit and non-auto share targets for 2031, based on the observed shares in 2011. For the Inner Area during the AM peak period, the TMP identifies an observed transit share of 15% in 2011 and a target transit share of 20% in 2031 (equating to a growth rate of approximately 1% per annum), as well as an observed non-auto share of 59% in 2011 and a target non-auto share of 64% in 2031 (equating to a growth rate of approximately 0.5% per annum).

Based on the foregoing, no background growth rate has been applied, as the evidence for growth is either inconclusive or accounted for with alternative travel modes. The 2023 and 2028 background conditions are therefore assumed to be equal.

The background traffic in 2023 and 2028 is shown in **Figure 6**.

Figure 6: 2023/2028 Background Traffic



6.0 ANALYSIS

6.1 Development Design

Sidewalk connections will be provided between the building entrance and Argyle Avenue. Sidewalks will be depressed and continuous across the shared access, parking garage access and loading access, in accordance with City standards.

Parking for bicycles will be provided in storage areas on both levels of the underground garage. In total, 78 underground bicycle parking spaces will be provided (39 spaces on both levels). Further review of the number of bicycle parking spaces is included in Section 6.2: Parking.

OC Transpo guidelines recommend that all developments within the vicinity of a bus route should have at least one bus stop within a walking distance of 400m, roughly a 5-minute walk. Among the

transit stops outlined in Section 4.1.6, all are within a 400m walking distance, except for stops #6894, #7666, and #7667. These three stops are within a 600m walking distance of the subject site.

The stops within 400m walking distance of the subject site provide service to routes 5, 14, 55, 56, and 114. The stops beyond 400m but within 600m walking distance provide service to routes 6 and 7.

A review of the Transportation Demand Management (TDM) – *Supportive Development Design and Infrastructure Checklist* has been conducted. A copy of the TDM checklist is included in **Appendix G**. All required TDM-supportive design and infrastructure measures in the TDM checklist are met. 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 building 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.

On-site garbage collection and loading/deliveries will be accommodated with a loading access on Argyle Avenue at the eastern edge of the property. Further review of the access is included in Section 6.4. Turning movements for trucks utilizing the loading access have been developed, showing a Medium Single Unit (MSU) design vehicle are included in **Figure 7** and **Figure 8**.

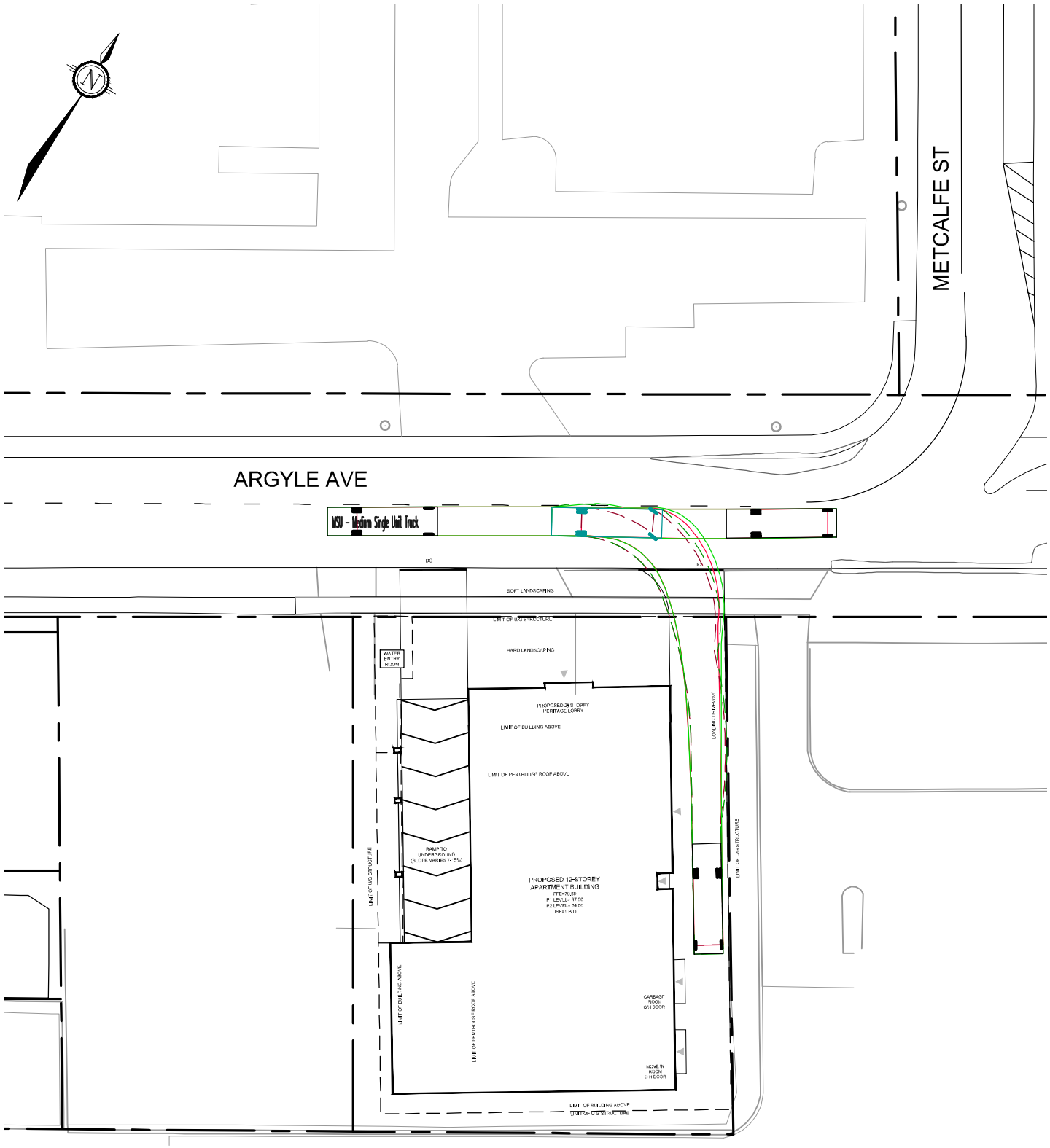
The fire route for the development is curbside along Argyle Avenue.

6.2 Parking

The subject site is located in Area B of Schedule 1 and Area X of Schedule 1A of the City of Ottawa's *Zoning By-Law* (ZBL). Minimum parking rates for vehicles and bicycles are summarized in **Table 8**.

Table 8: Parking Requirements

Land Use	Rate	Units	Required
Vehicle Parking			
Residential	Parking Rate: 0.5 per dwelling unit after the first 12 units, with a 10% reduction as all parking is below grade	123 units	50
	Visitor Rate: 0.1 per dwelling unit after the first 12 units		11
		Minimum	**61**
		Provided	**63**
Bicycle Parking			
Residential	Minimum Bicycle Rate: 0.5 per dwelling unit	123 units	62
		Minimum	**62**
		Provided	**78**



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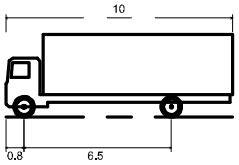

MSU - Medium Single Unit Truck

Overall Length	10.000m
Overall Width	2.600m
Overall Body Height	3.650m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	11.100m

100 ARGYLE AVENUE

TURNING MOVEMENT (MSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

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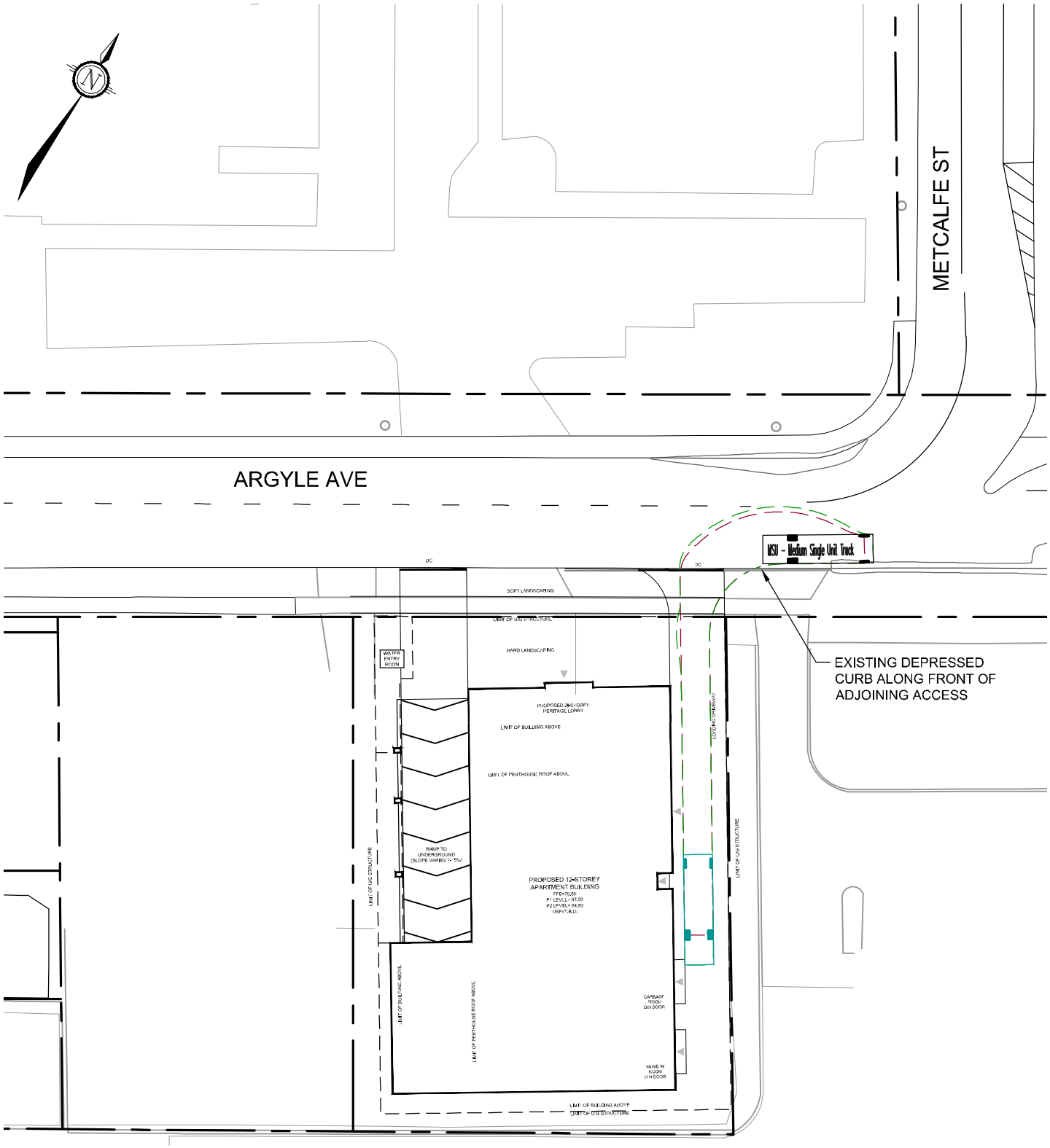

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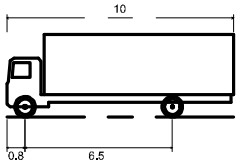

MSU - Medium Single Unit Truck

Overall Length	10.000m
Overall Width	2.600m
Overall Body Height	3.650m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	11.100m

100 ARGYLE AVENUE

TURNING MOVEMENT (MSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE AUG 2021 | JOB 118116 | FIGURE FIGURE 8

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Based on the previous table, the amount of vehicle and bicycle parking proposed exceeds the minimum requirements of the City's ZBL.

6.3 Boundary Streets

This section provides a review of the boundary street Argyle Avenue, using complete streets principles. The *Multi-Modal Level of Service* (MMLOS) guidelines produced by IBI Group in October 2015 have been used to evaluate the level of service of boundary roadways for each mode of transportation.

Schedule B of the City of Ottawa's Official Plan identifies Argyle Avenue as being in the General Urban Area. Within the boundaries of the subject site, Argyle Avenue is classified as an arterial roadway (between the western and eastern section of Metcalfe Street). Therefore, Argyle Avenue has been evaluated using the targets set for arterial roadways within the General Urban Area.

Since Argyle Avenue does not provide transit service, the transit level of service (TLOS) has not been evaluated. All other modes have been evaluated based on the targets outlined in Exhibit 22 of the MMLOS guidelines.

6.3.1 Pedestrian Level of Service (PLOS)

Exhibit 4 of the MMLOS guidelines has been used to evaluate the segment PLOS of Argyle Avenue. Exhibit 22 of the MMLOS guidelines suggests a target PLOS C for all roadways within the General Urban Area. The results of the segment PLOS analysis are summarized in **Table 9**.

Table 9: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On-Street Parking	Operating Speed[1]	PLOS
Argyle Avenue (north side)					
≥ 2.0m	0m	> 3000 vpd	No	60 km/h	C
Argyle Avenue (south side)					
1.5m	≥ 2.0m	> 3000 vpd	Yes	60 km/h	D

1. Operating speed of Argyle Avenue taken as the regulatory speed limit plus 10 km/h

6.3.2 Bicycle Level of Service (BLOS)

Exhibit 11 of the MMLOS guidelines has been used to evaluate the segment BLOS of Argyle Avenue. Exhibit 22 of the MMLOS guidelines suggests a target BLOS D for all roadways with no bike route classification within the General Urban Area. The results of the segment BLOS analysis are summarized in **Table 10**.

Table 10: BLOS Segment Analysis

Road Class	Bike Route	Type of Bikeway	Travel Lanes	Posted Speed	BLOS
Argyle Avenue (Metcalfe Street West to Metcalfe Street East)					
Arterial	No Class	Mixed Traffic	3	50 km/h	D

6.3.3 Truck Level of Service (TkLOS)

Exhibit 20 of the MMLOS guidelines has been used to evaluate the segment TkLOS of Argyle Avenue. Both lanes of Argyle Avenue have been evaluated, as access to the Museum of Nature's shipping and receiving zone is provided on Argyle Avenue, approximately 30m west of Metcalfe Street East. Exhibit 22 of the MMLOS guidelines suggests a target TkLOS E for arterial roadways not classified as truck routes within the General Urban Area. The results of the segment TkLOS analysis are summarized in **Table 11**.

Table 11: TkLOS Segment Analysis

Curb Lane Width	Number of Travel Lanes Per Direction	TkLOS
Argyle Avenue (north lane)		
> 3.7m	2	A
Argyle Avenue (south lane)		
≤ 3.0m	2	E

6.3.4 Segment MMLOS Summary

Argyle Avenue meets the target BLOS D and TkLOS E, but does not meet the target PLOS C.

The south side of Argyle Avenue does not achieve the target PLOS C. The sidewalk is approximately 1.5m with a boulevard width of 2.3m. It is therefore feasible to achieve the target PLOS C, by widening the sidewalk to 1.8m while maintaining a boulevard width of 2.0m. This is identified for the City's consideration as funding becomes available.

6.4 Access Design

The subject site is currently served by a shared RIRO access on Argyle Avenue with the adjacent property to the west, and a RIRO access on Argyle Avenue approximately 5.0m west of the eastern property line.

The proposed development will be served by a two-way underground parking garage access approximately 4.2m east of the western property line. The existing shared RIRO access will be maintained, but will exclusively serve the adjacent property. The proposed development will also have a loading access for garbage collection and deliveries, located approximately at the eastern property line. Full-height curb and sidewalks will be reinstated where necessary, and depressed curb and continuous sidewalks will be provided across the full width of the accesses, as per City standards.

Section 25 (a) of the City of Ottawa's *Private Approach By-Law* identifies a requirement for properties with a frontage of 20m to 34m to have no more than one two-way private approach or two one-way private approaches. Considering the loading access will be used exclusively by delivery and garbage collection vehicles, the only exclusive access to 100 Argyle Avenue is the two-way underground parking garage ramp. The shared access must be maintained for the adjacent property to the west.

Section 25 (c) of the *Private Approach By-Law* identifies a requirement for two-way accesses to have a width no greater than 9m, as measured at the street line. Section 107 (1)(a) of the *Zoning By-Law* identifies a minimum width requirement of 6.0m for a double traffic lane leading to a parking garage. Despite Section 107 (1)(a), any apartment building access mplust also meet Section 107 (1)(aa),

which identifies a maximum width requirement of 6.7m for any double traffic lane which leads to 20 or more parking spaces. The proposed underground parking access is approximately 6.0m in width, thereby meeting these requirements.

The proposed loading access is approximately 5.0m in width, and the shared access with the property to the west is approximately 3.0m in width.

Section 25 (m) of the *Private Approach By-Law* identifies a requirement to provide a minimum distance of 18m between the private approach and the nearest intersecting street line, as measured at the street line. Section 25 (m) identifies a requirement to provide a minimum distance of 15m between a two-way private approach and any other private approach. The proposed spacing between the loading access and the underground parking access is 19m.

The proposed spacing between the underground parking access and the existing shared access is approximately 2.4m. The minimum spacing can be met by shifting the underground parking access to be adjacent to the loading access, however the spacing between the underground access and Metcalfe Street East would then be less than the 18m minimum. Additionally, there is an access to the adjacent police station approximately 3.3m east of the property line, meaning three accesses would be implemented within 18m of Metcalfe Street East. This configuration is considered less desirable than the proposed access configuration. Therefore, a relaxation of the minimum distance is requested for the spacing between the underground parking garage and the shared access.

Section 25 (p) of the *Private Approach By-Law* identifies a requirement to provide a minimum spacing of 3m between the nearest edge of the private approach and the property line, as measured at the street line. The spacing between the proposed underground parking access and the western property line is approximately 4.2m, however the spacing between the proposed access and the existing access is 2.4m. Section 25 (p) states that a relaxation of the minimum clearance distance from 3m to 0.3m is permissible by the General Manager, provided there are no safety issues associated with doing so. The shared access will continue to serve approximately 20 office spaces on the adjacent property to the west. The majority of traffic using the shared access will be inbound in the AM while traffic at the underground parking access will be outbound, and vice versa in the PM. The one-way nature of Argyle Avenue will help reduce the number of potential conflict points compared to a two-way road with adjacent accesses.

Further relaxation of the minimum clearance distance is requested for the loading access, which is proposed to abut the eastern property line. As this access doesn't serve parking, the requirements of the *Private Approach By-Law* are not considered applicable.

Section 25 (u) of the *Private Approach By-Law* identifies a requirement that any private approach may not exceed a grade of 2% within 9m of the street line. The proposed underground parking access will have a grade of approximately 2% for a distance of 7.5m within the property, where it transitions to a 7% grade. The Transportation Association of Canada (TAC) identifies that the passenger design vehicle has a wheel base of 3.2m and a front bumper overhang of 1.1m. Based on these characteristics, the proposed 2% grade for a distance of 7.5m within the property is sufficient for a standard passenger vehicle to stop entirely within private property with both tires on the 2% grade and have appropriate sight lines to the sidewalk. A waiver of the access grade requirements is requested, as driver sightlines to pedestrians walking along Argyle Avenue will still be adequate.

Implementation of the proposed underground parking access will require a shift of the two existing on-street parking spaces in front of the subject site, such that the spaces are approximately 7m further east. Removal of the existing exclusive site access will accommodate this shift, as well as the implementation of the loading access at the eastern limit of the site. The City's *Traffic and Parking By-Law* states that on-street parking spaces must be located a minimum distance of 1.5m from any private approach, and City staff have confirmed that on-street parking spaces must be 5.5m in length. Considering these dimensions, two on-street parking spaces can be provided, resulting in no net loss of on-street parking spaces.

TAC outlines a minimum sight distance requirement of 95m for vehicles exiting the accesses to the subject site, which is approximately the distance to the upstream intersection at Metcalfe Street West/Argyle Avenue. Provided the vegetation proposed at the front of the development is non-obstructive, the sight distance requirement is met for all accesses.

6.5 Transportation Demand Management

6.5.1 Context for TDM

A breakdown of the proposed development's 123 dwellings by type can be summarized as follows:

- 26 studio dwellings;
- 86 one-bedroom dwellings, and;
- 11 two-bedroom dwellings.

6.5.2 Need and Opportunity

The subject site is located in City's 'Downtown Ottawa Urban Design Strategy' Design Priority Area, and is located in the 'Centretown' Community Design and Secondary Plans. The mode shares for the proposed residences are assumed to be consistent with the mode shares observed in the Ottawa Inner Area, which include an approximately 25% driver share during the peak hours. Given the size of the development, failure to meet the driver share by 10% would equate to an additional four to five vehicle trips generated during the peak hours.

The 25% driver share can be considered appropriate, as the subject site is well served by sidewalks, cycling facilities (such as cycle tracks on O'Connor Street), and transit. The development is also in close proximity to many amenities, including commercial and retail areas, parks, recreation facilities, museums, and multi-use pathways.

6.5.3 TDM Program

A review of the City's *TDM Measures Checklist* has been conducted by the proponent, who has committed to providing the following TDM measures.

- Display local area maps with walking/cycling access routes and key destinations at major entrances;
- Display relevant transit schedules and route maps at entrances;
- Unbundle parking cost from purchase price or monthly rent;
- Provide a multimodal travel option information package to new residents.

In addition to the above measures, the proponent has agreed to consider a contract with a provider to install an on-site carshare vehicle.

A copy of the completed measures checklist is included in **Appendix G**.

7.0 CONCLUSIONS AND RECOMMENDATIONS

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

Forecasting

- The net increase in trips generated by the proposed development is approximately 25 person trips in the AM peak hour and 27 person trips in the PM peak hour, which includes an increase of approximately three vehicle trips in the AM peak hour and two vehicle trips in the PM peak hour.

Development Design and Parking

- Pedestrian facilities will be provided between the building entrances and Argyle Avenue. Sidewalks will be depressed and continuous across the accesses, in accordance with City standards.

- Transit stops serving OC Transpo Routes 5, 14, 55, 56, and 114 are within 400m walking distance of the subject site. Transit stops serving OC Transpo Routes 6 and 7 are within 600m walking distance of the subject site.

- All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

- A total of 63 vehicle parking spaces and 78 bicycle parking spaces are proposed in two underground parking levels for the development. The amount of vehicle and bicycle parking proposed exceeds the minimum requirements of the City's ZBL.

Boundary Streets

- Argyle Avenue meets the target bicycle level of service (BLOS) D and truck level of service (TkLOS) E, but does not meet the target pedestrian level of service (PLOS) C.

- The south side of Argyle Avenue can achieve the target PLOS C by widening the sidewalk to 1.8m while maintaining a boulevard width of 2.0m. This is identified for the City's consideration as funding becomes available.

Access Design

- The proposed development will be served by a two-way underground parking garage access approximately 4.2m east of the western property line. The existing shared RIRO access will be maintained, but will exclusively serve the adjacent property. An access exclusively for garbage collection and deliveries is located approximately at the eastern property line.

- Section 25 (a) of the *Private Approach By-Law* identifies a requirement for properties with a frontage of 20m to 34m to have no more than one (1) two-way private approach or two (2) one-way private approaches. Considering the loading access will be used exclusively by

delivery and garbage collection vehicles, the only exclusive access to 100 Argyle Avenue is the two-way underground parking garage ramp. The shared access must be maintained for the neighbouring property to the west.

- Section 25 (c) of the *Private Approach By-Law* identifies a requirement for two-way accesses to have a width no greater than 9m, as measured at the street line. Section 107 (1)(a) of the ZBL identifies a minimum width requirement of 6.0m for a double traffic lane leading to a parking garage. Any access to an apartment building must also meet Section 107 (1)(aa), which identifies a maximum width requirement of 6.7m for any double traffic lane which leads to 20 or more parking spaces. The proposed underground parking access is approximately 6.0m in width, thereby meeting these requirements.

- The proposed loading access is approximately 5.0m in width, and the shared access with the property to the west is approximately 3.0m in width.

- Section 25 (m) of the *Private Approach By-Law* identifies a requirement to provide a minimum distance of 18m between the private approach and the nearest intersecting street line, and a minimum distance of 15m between a two-way private approach and any other private approach. The proposed spacing between the loading access and the underground parking access is 19m.

- The proposed spacing between the underground parking access and the existing shared access is approximately 2.4m. A relaxation of the minimum distance outlined in Section 25 (m) is requested for the spacing between these two accesses.

- Section 25 (p) of the *Private Approach By-Law* identifies a requirement to provide a minimum spacing of 3m between the nearest edge of the private approach and the property line, as measured at the street line. The spacing between the proposed underground parking access and the western property line is approximately 4.2m, however the spacing between the proposed access and the existing shared access is approximately 2.4m. Section 25 (p) states that a relaxation of the minimum clearance distance from 3m to 0.3m is permissible by the General Manager, provided there are no safety issues associated with doing so.

- Further relaxation of the minimum clearance distance is requested for the loading access, which is proposed to abut the eastern property line. As this access doesn't serve parking, the requirements of the *Private Approach By-Law* are not considered applicable.
- Section 25 (u) of the *Private Approach By-Law* identifies a requirement that any private approach may not exceed a grade of 2% within 9m of the street line. The proposed underground parking access will have a grade of approximately 2% for a distance of 7.5m within the property, where it transitions to a 7% grade. The Transportation Association of Canada (TAC) identifies that the passenger design vehicle has a wheel base of 3.2m and a front bumper overhang of 1.1m. Based on these characteristics, the proposed 2% grade for a distance of 7.5m within the property is sufficient for a standard passenger vehicle to stop entirely within private property with both tires on the 2% grade and have appropriate sight lines to the sidewalk. A waiver of the access grade requirements is requested, as driver sightlines to pedestrians walking along Argyle Avenue will still be adequate.

- Implementation of the underground parking access will require a shift of the two existing on-street parking spaces in front of the subject site, such that the spaces are approximately 7m

further east. Removal of the existing site-exclusive access will accommodate this shift, as will the implementation of the loading access at the eastern limit of the site. Based on the parking space dimension regulations outlined by City staff and the *Traffic and Parking By-Law*, two on-street parking spaces can be supported.

- TAC outlines a minimum sight distance requirement of 95m for vehicles exiting the accesses to the subject site. Provided the vegetation proposed at the front of the development is non-obstructive, the sight distance requirement is met for all accesses.

Transportation Demand Management

- The proponent has committed to providing the following TDM measures:
  - Display local area maps with walking/cycling access routes and key destinations at major entrances;
  - Display relevant transit schedules and route maps at entrances;
  - Unbundle parking cost from purchase price or monthly rent;
  - Provide a multimodal travel option information package to new residents.

- In addition to the above measures, the proponent is considering a contract with a provider to install an on-site carshare vehicle.

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

NOVATECH

Prepared by:

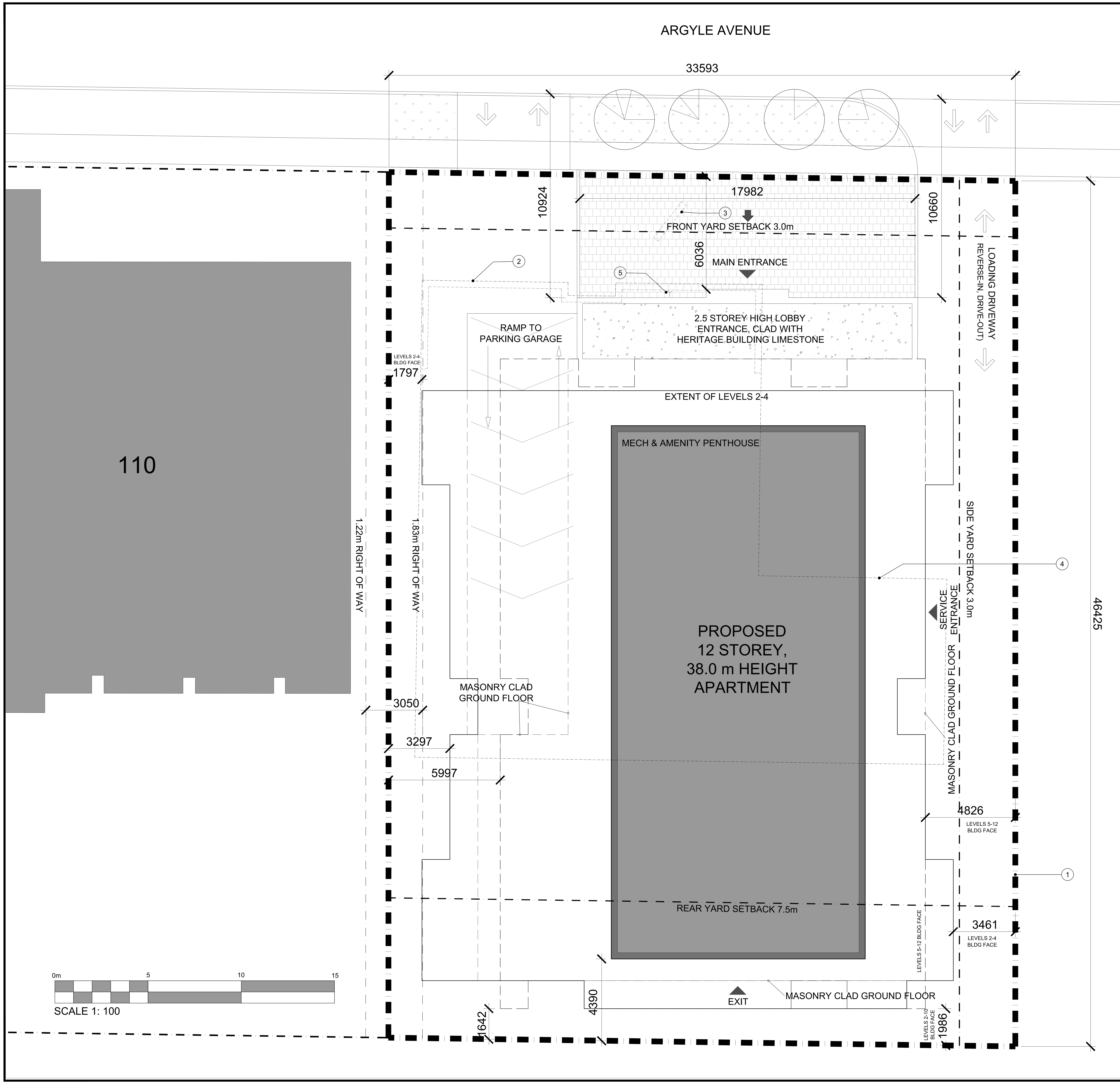
Joshua Audia, B.Sc.
E.I.T.,
Transportation/Traffic

Reviewed by:

Brad Byvelds, P.Eng.
Project Coordinator,
Transportation/Traffic

APPENDIX A

Site Plan



KEY PLAN, SCALE 1:2000

SITE PLAN SYMBOLS

- PAVED SURFACE
- BALCONY / TERRACE
- ROOF BELOW
- TWO WAY VEHICLE CIRCULATION
- PRIMARY RESIDENTIAL ENTRANCE
- SECONDARY RESIDENTIAL ENTRANCE
- PROPERTY LINE
- BUILDING SETBACKS

DRAWING NOTES

1. PROPERTY LINE
2. OUTLINE OF EXISTING BUILDING (HERITAGE FACADE TO BE REINSTATED EAST)
3. EXISTING SIGN (TO BE REMOVED)
4. REAR PORTION OF EXISTING BUILDING TO BE REMOVED
5. SIAMESE CONNECTION

PROJECT INFORMATION

For 100 Argyle Avenue

ZONING: GM5[68] F[2.0] H[18.5]

SITE AREA: 1,554.6 sq. m. (16,734.3 sq. ft)

Performance Standards	**Required**	**Provided**
Building Height	18.5 m max.	38.0 m
Front Yard Setback	3 m min.	6.04 m
Interior Side Yard Setback	3 m min.	1.78 m
Rear Yard Setback	7.5 m min.	1.64 m
Landscape Area Width (Abutting a Street)	3 m min.	2.56 m
Landscape Area Width (Other Instances)	0 m min.	0 m
Amenity Space	6 sq. m. x 123 units = 738 sq. m. (50% required to be communal amenity = 369 sq. m.)	Ground Floor (Interior): 300 m² Ground Floor (Exterior): 63 sq. m. Private Balconies: 281 sq. m. Penthouse (Interior): 186 sq. m. Penthouse (Exterior): 372 sq. m. Total = **1202 sq. m.**
Minimum Vehicular Parking Spaces	50 Residential (0.5 per unit after 12 less 10%)	52
	11 Visitor (0.1 per unit after 12)	11
	61 Total	63
Minimum Accessible Vehicular Parking Spaces (Traffic and Parking By-law No. 2017-301 C)	1	4
Drive Aisle Width - Parking Lot	6.7 m	N/A
Drive Aisle Width - Parking Garage	6 m	6 m
Minimum Loading Spaces	0	0
Minimum Bicycle Parking Spaces	62 Residential (0.5 per unit)	78 (Interior)
Storage Lockers	0	60

Building Statistics

Gross Floor Areas (City of Ottawa Zoning By-law Definition)	
Parking Levels	0 sq. m. / 0 sq. ft.
Ground Level	0 sq. m. / 0 sq. ft.
2nd Level	934.6 sq. m. / 10,060 sq. ft.
3rd - 4th Level (2 x 853.3 sq. m.)	1,706.6 sq. m. / 18,370 sq. ft.
5th - 12th Level (8 x 766.5 sq. m.)	6131.6 sq. m. / 66,000 sq. ft.
Penthouse Level	0 sq. m. / 0 sq. ft.
Total (above grade)	**8,772.8 sq. m. / 94,430 sq. ft.**

Construction Area	
Parking Levels (2 x 1,427.1 sq. m.)	2,854.2 sq. m. / 30,723 sq. ft.
Ground Level	769.9 sq. m. / 8,287 sq. ft.
2nd Level	934.6 sq. m. / 10,060 sq. ft.
3rd - 4th Level (2 x 853.3 sq. m.)	1,706.6 sq. m. / 18,370 sq. ft.
5th - 12th Level (8 x 746.5 sq. m.)	6131.6 sq. m. / 66,000 sq. ft.
Penthouse Level	422.0 sq. m. / 4,540 sq. ft.
Total (above grade)	**12,818.9 sq. m. / 137,980 sq. ft.**

Unit Statistics	
1 Bedroom	55
1 Bedroom + Den	31
2 Bedroom	11
Studio	26
Total	**123**

CIVIL ENGINEER

LEGAL DESCRIPTION

TOPOGRAPHICAL PLAN OF

LOT 3 & PART OF LOT 4
REGISTERED PLAN NO.30
CITY OF OTTAWA
Prepared by Annis, O'Sullivan, Vollebekk Ltd.

LANDSCAPE ARCHITECT

PROJECT DEVELOPER

Colonnade BridgePort
Tel.:(613) 225-8118
E-Mail: bmartell@colonnadebridgeport.ca

SURVEYOR

Annis,O'Sullivan, Vollebekk Ltd.
14 Concourse Gate, Suite 500
Nepean, ON Canada, K2E 7S6
Tel.:(613) 727-0850

URBAN PLANNER

FoTenn Consultants Inc.
223 McLeod Street
Ottawa, ON Canada, K2P 0Z8
Tel.:(613) 730-5709
Fax: (613) 730-1136
E-Mail: alain@fotenn.com, tremblay@fotenn.com

No.	DESCRIPTION	DATE
1	ISSUED FOR INTERNAL REVIEW	July 22,'21
1	SPC SUBMISSION	July 21,'21

REVISIONS:

ARCHITECT SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
RODERICK J. LAHEY
LICENCE
4375

NORTH ARROW:

CLIENT:

COLONNADE BRIDGEPORT
Property Investment & Management

ARCHITECT:

rla/architecture
56 Beech Street, Ottawa, Ontario K1S 3J6
t.613.724.9932 f.613.724.1209 www.rodericklahey.ca

PROJECT TITLE:

100 ARGYLE AVENUE

OTTAWA ONTARIO

SHEET TITLE:

SITE PLAN

DRAWN: RLA	CHECKED: RLA
SCALE: AS SHOWN	SHEET No. A100
PROJECT No. 1720	

PAPER SIZE: ARCH Full Bleed D (24.00 X 36.00 Inches)
PEN STYLE: 0_RLA Master.ctb
PLOT SCALE: 1:25.4
F:\2017\1720 100 Argyle (Bridgeport)\01_Design Development\1720 Site Plan.dwg
PLOT DATE: Friday, August 13, 2021

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	**100 Argyle Avenue**
Description of Location	**The approximately 0.16-hectare property is located midblock between Metcalfe Street and Elgin Street**
Land Use Classification	**High-Rise Residential**
Development Size (units)	**126 dwellings**
Development Size (m^2)	**-**
Number of Accesses and Locations	**- One underground parking access on Argyle Avenue, near western limits of the property** **- One shared access with property to the west on Argyle Avenue** **- One loading access on Argyle Avenue, near eastern limits of the property**
Phase of Development	**1**
Buildout Year	**2023**

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

2. Trip Generation Trigger

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

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

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

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

3. Location Triggers

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

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

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

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		✓
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 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?		✓
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

	Yes	No
Does the development satisfy the Trip Generation Trigger?		✓
Does the development satisfy the Location Trigger?	✓	
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).

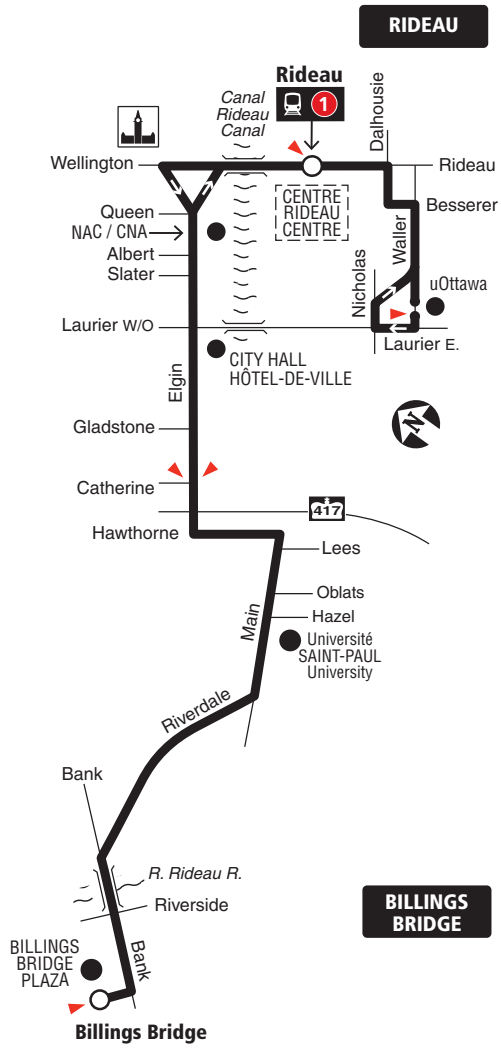
APPENDIX C

OC Transpo Route Maps

5 BILLINGS BRIDGE / RIDEAU

Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée



Station

Timepoint / Heures de passage

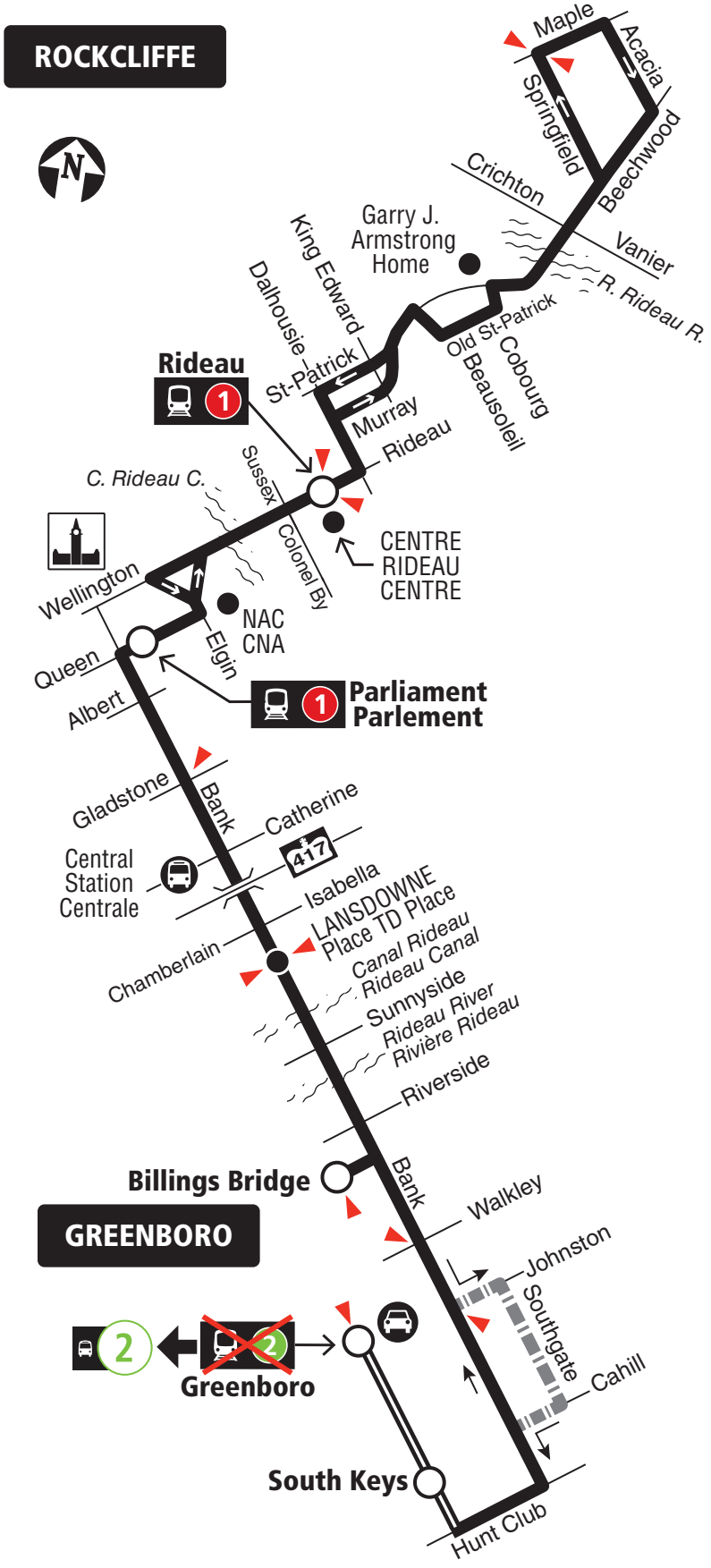
2020.08

Schedule / Horaire.....613-560-1000
Text / Texto 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

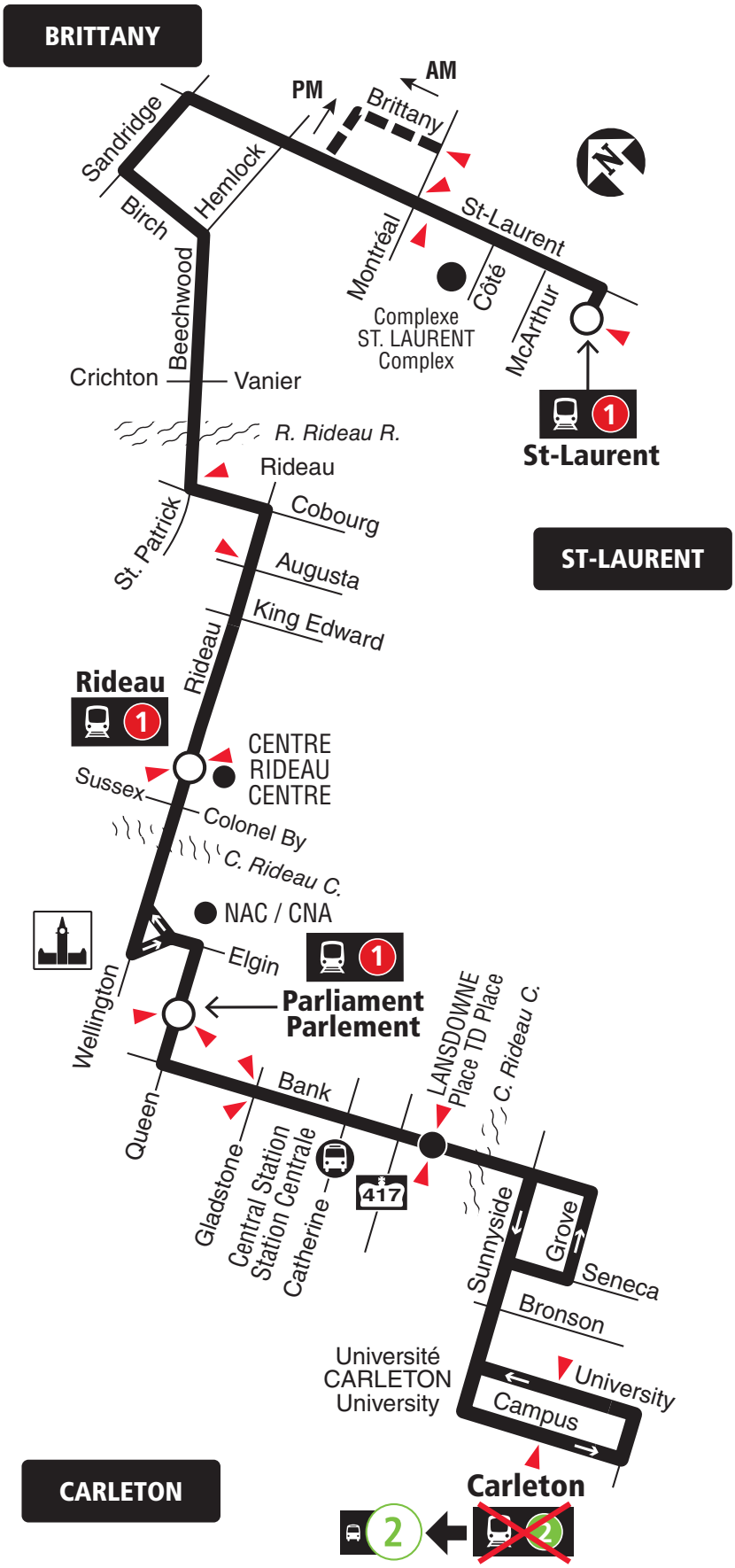
Customer Service
Service à la clientèle **613-741-4390**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité..... **613-741-2478**

Effective April 26, 2020
En vigueur 26 avril 2020

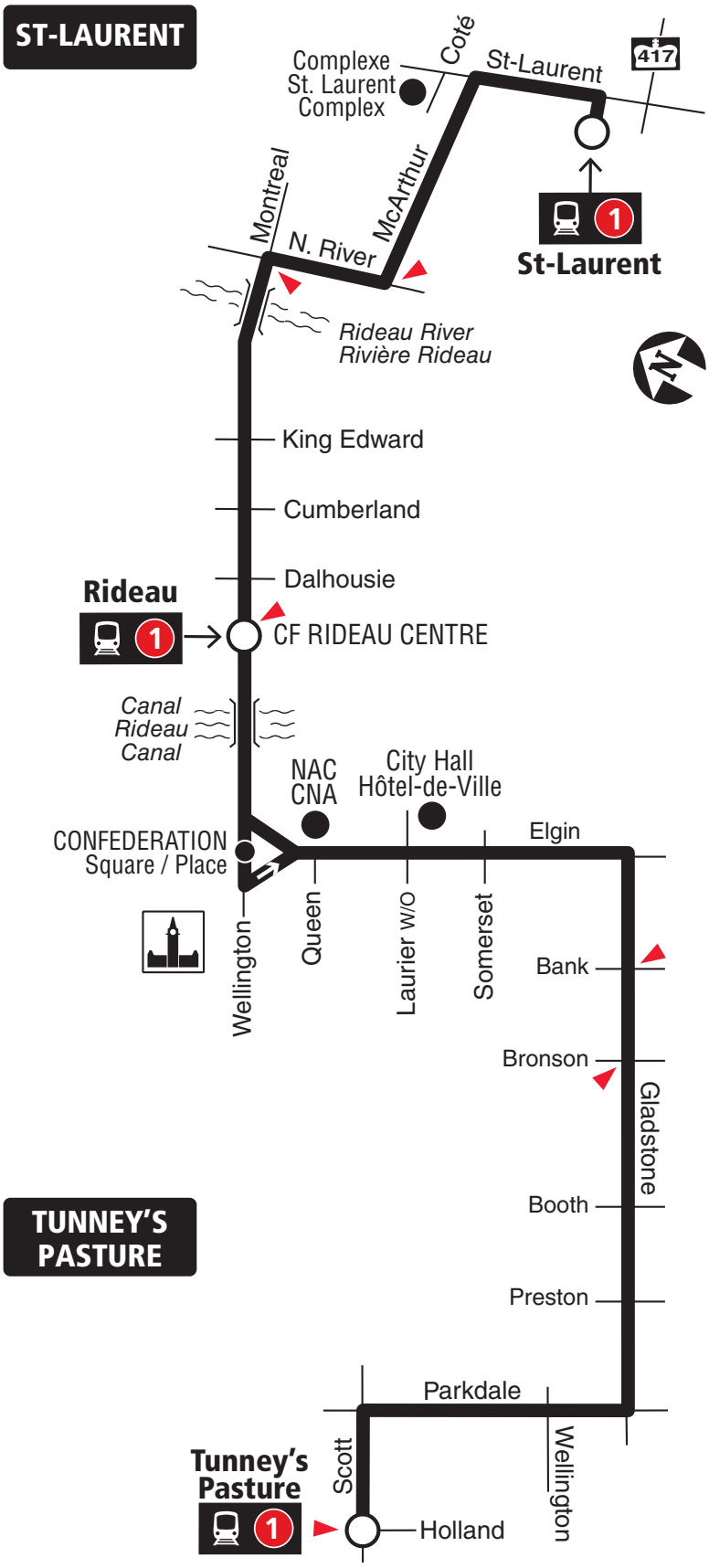
OC Transpo
INFO 613-741-4390
octranspo.com


ROCKCLIFFE
N
Maple
Acacia
Springfield
Beechwood
Crichton
Vanier
R. Rideau R.
Garry J. Armstrong Home
King Edward
Dalhousie
St-Patrick
Old St-Patrick
Cobourg
Beausoleil
Rideau
1
Murray
Rideau
Sussex
C. Rideau C.
Colonel By
CENTRE RIDEAU CENTRE
Wellington
NAC CNA
Elgin
Queen
Albert
1
Parliament Parlement
Gladstone
Bank
Catherine
417
Central Station Centrale
Isabella
LANSDOWNE Place TD Place
Chamberlain
Canal Rideau Rideau Canal
Sunnyside
Rideau River Rivière Rideau
Riverside
Billings Bridge
Bank
Walkley
GREENBORO
Johnston
Southgate
Cahill
2
2
Greenboro
South Keys
Hunt Club
Transitway & Station
No early morning service / Aucun service matinal
Park & Ride / Parc-o-Bus
Timepoint / Heures de passage

2020.08


BRITTANY
AM
PM
Brittany
Sandridge
Birch
Hemlock
Beechwood
Montréal
St-Laurent
Côté
McArthur
Complexe
ST. LAURENT
Complex
Crichton
Vanier
R. Rideau R.
Rideau
St. Patrick
Cobourg
Augusta
King Edward
Rideau
St-Laurent
ST-LAURENT
Rideau
CENTRE
RIDEAU
CENTRE
Sussex
Colonel By
C. Rideau C.
NAC / CNA
Elgin
Parliament
Parlement
Wellington
Queen
Bank
LANSDOWNE
Place TD Place
C. Rideau C.
Gladstone
Central Station
Station Centrale
Catherine
417
Sunnyside
Grove
Seneca
Bronson
University
Campus
Université
CARLETON
University
Carleton
CARLETON
Station
Peak periods only / Périodes de pointe seulement
Timepoint / Heures de passage

2020.08



Station

Timepoint / Heures de passage

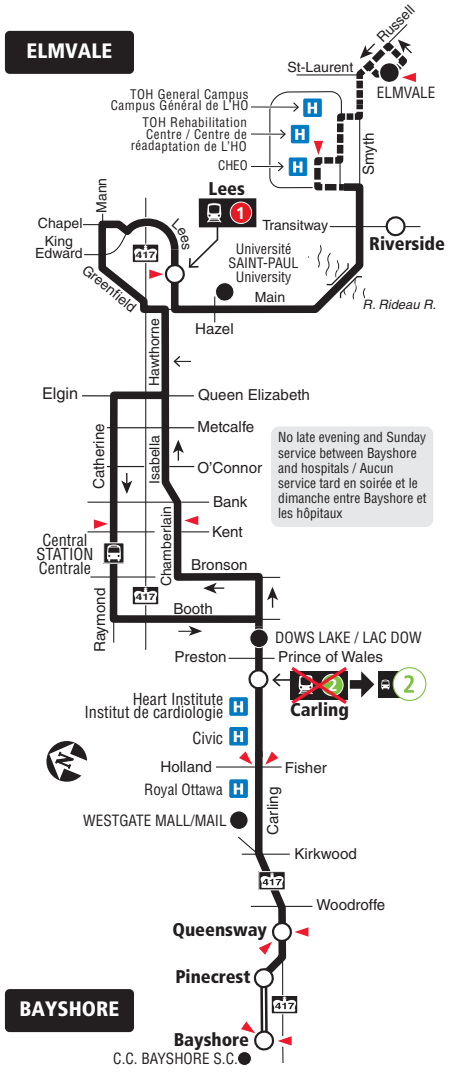
2020.09

55 ELMVALE / BAYSHORE

Local

7 days a week / 7 jours par semaine

On Sundays and evenings, service only between Elmvale and General campus of the Ottawa Hospital /
Service le dimanche et en soirée seulement entre Elmvale et le campus Général de l'Hôpital d'Ottawa



Transitway & Station

Late evenings and Sundays: service only between Elmvale and the Ottawa Hospital, General Campus
Service tard en soirée et le dimanche: seulement entre Elmvale et le campus Général de l'Hôpital d'Ottawa

Timepoint / Heures de passage

2020.06

Schedule / Horaire.....613-560-1000
Text / Texto 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

Customer Service
Service à la clientèle **613-741-4390**

Lost and Found / Objets perdus..... **613-563-4011**

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

Effective June 29, 2020
En vigueur 29 juin 2020

OC Transpo

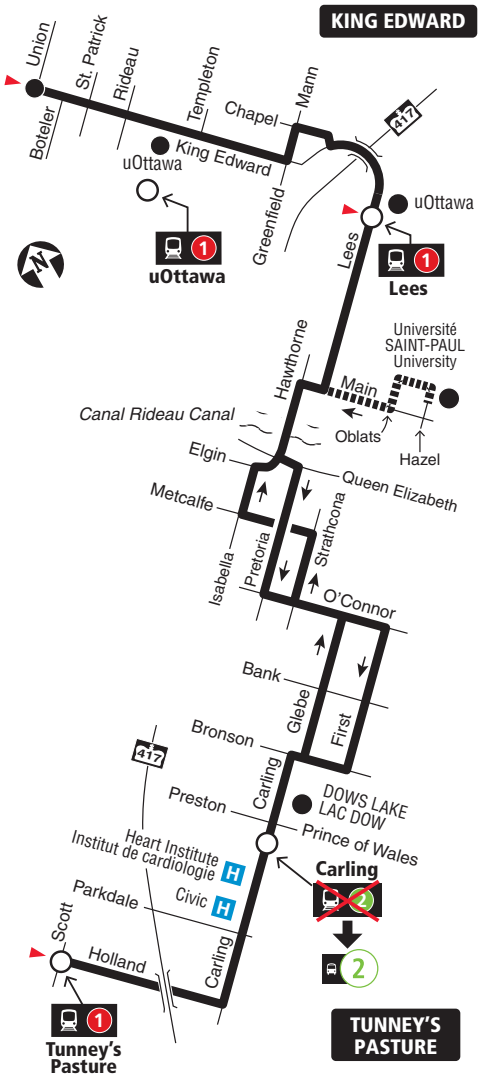
INFO 613-741-4390
octranspo.com

56 KING EDWARD / TUNNEY'S PASTURE

Local

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



Station
Some trips / Certains trajets
Timepoint / Heures de passage

2020.04

Schedule / Horaire.....613-560-1000
Text / Texto 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

Customer Service
Service à la clientèle **613-741-4390**

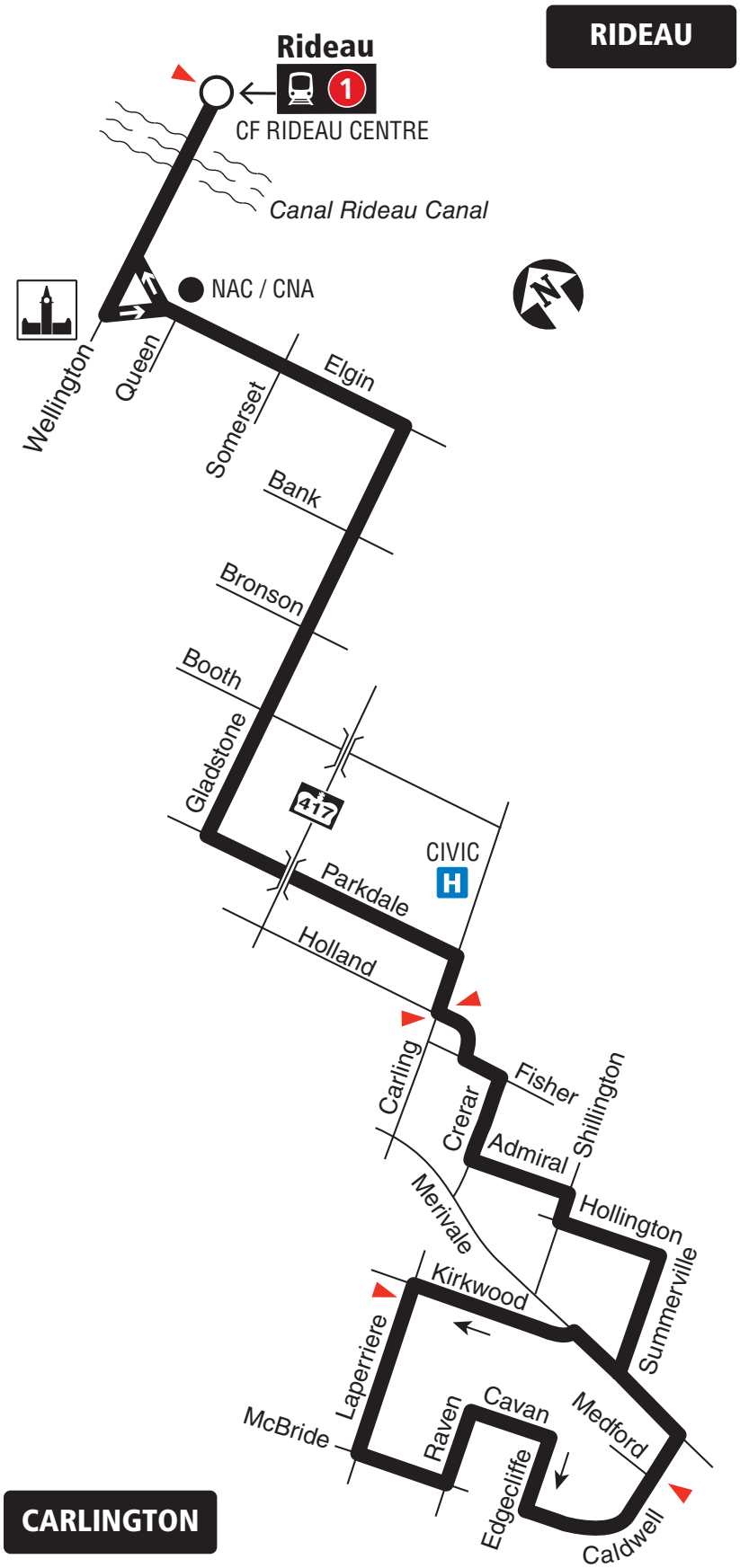
Lost and Found / Objets perdus..... **613-563-4011**

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

Effective May 3, 2020
En vigueur 3 mai 2020

OC Transpo

INFO 613-741-4390
octranspo.com



Station

Timepoint / Heures de passage

2020.08


17
Slater
16
19
12
Mackenzie King
STO
Laurier W.
6
7
11
Somerset W.
Bay
Lyon
Kent
Bank
O'Connor
Metcalfe
Elgin
City Hall
Hôtel de ville
Colonel By
Nicholas
uOttawa
14
Gladstone
114
Canadian Museum of Nature
Musée canadien de la nature
5
Central Station
Station centrale
55
Catherine
Queen Elizabeth
Rideau Canal
Main
Greenfield
QUEENSWAY
Chamberlain
Isabella
Pretoria
56
Hawthorne
Lees
Immaculata
Strathcona
Oblats
Hazel
Reine-Elizabeth
Glebe
First
Saint-Paul University
Université Saint-Paul
TD Place
Place TD
Lansdowne Park
Parc Lansdowne
Lansdowne
Queen Elizabeth
Canal Rideau
Riverdale
Windsor
Smyth
Riverside
Sunnyside
Seneca
Grove
49
Riverside

APPENDIX D

Traffic Count Data

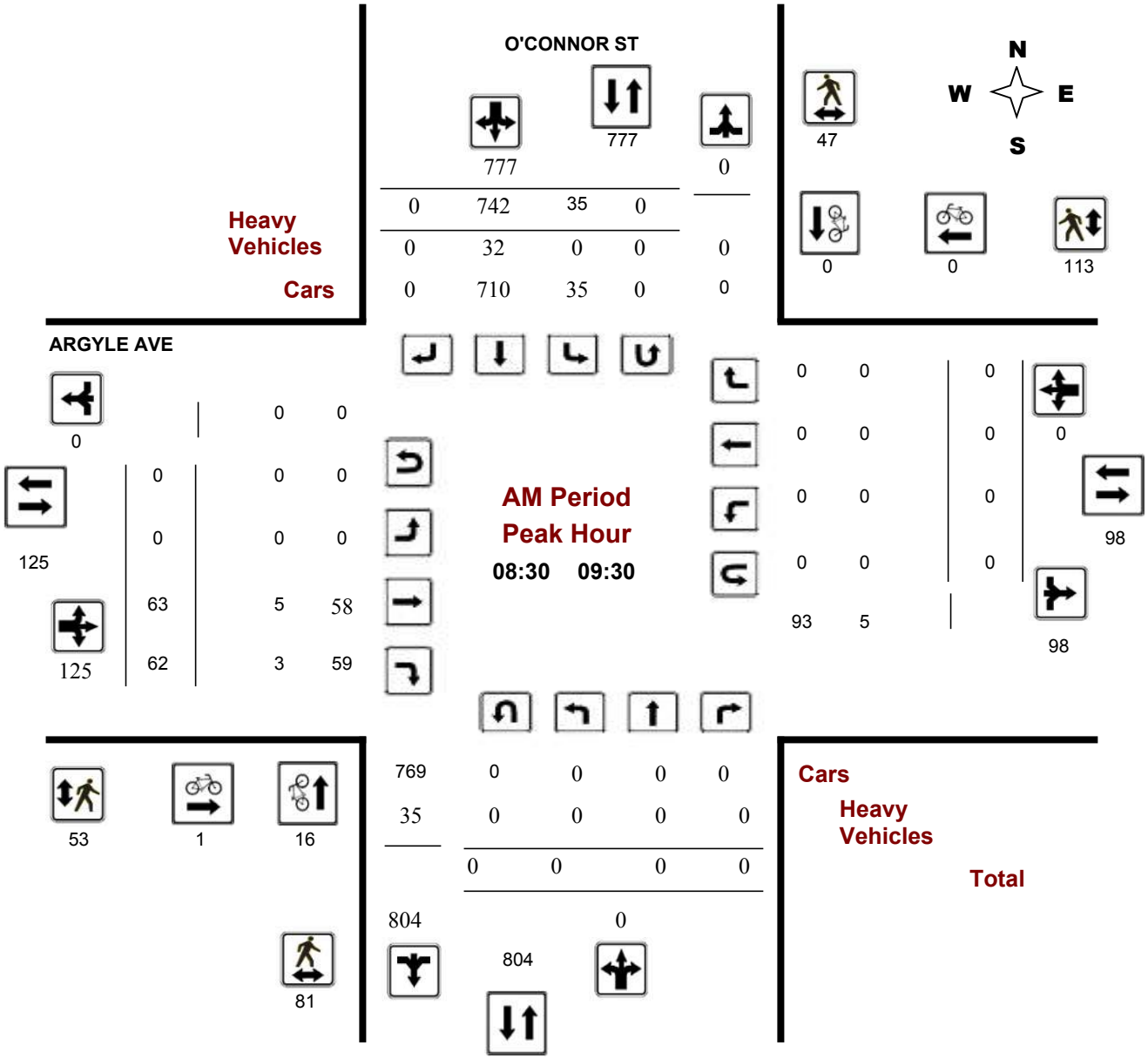
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE @ O'CONNOR ST

Survey Date: Tuesday, March 21, 2017 **WO No:** 36790

Start Time: 07:00 **Device:** Miovision



Comments

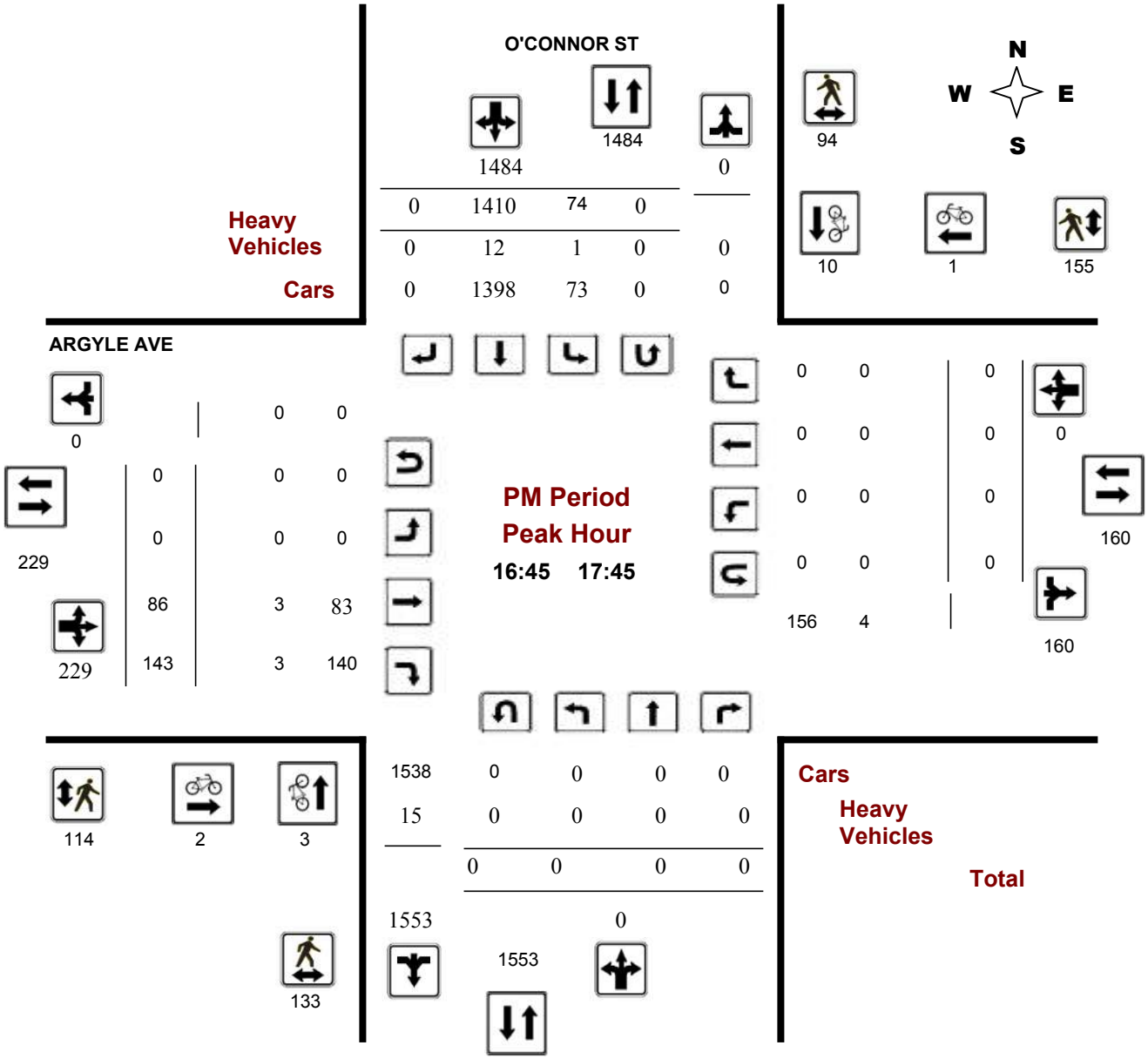
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE @ O'CONNOR ST

Survey Date: Tuesday, March 21, 2017 **WO No:** 36790

Start Time: 07:00 **Device:** Miovision



Comments

Study Name 5299277 - Catherine St/HWY 417 and O'Connor St
Start Date Tuesday, March 21, 2017 7:00 AM
End Date Tuesday, March 21, 2017 6:00 PM
Site Code 36132103

Report Summary

		Southbound							Westbound							Northbound							Northeastbound							Eastbound								Crosswalk	
Time Period	**Class.**	**R**	**BR**	**T**	**L**	**U**	**I**	**O**	**R**	**T**	**BL**	**L**	**U**	**I**	**O**	**R**	**T**	**L**	**HL**	**U**	**I**	**O**	**HR**	**BR**	**BL**	**HL**	**U**	**I**	**O**	**HR**	**R**	**T**	**L**	**U**	**I**	**O**	**Total**		**Ped**	**Total**
Peak 1	Lights	79	316	369	0	0	764	0	0	844	216	102	0	1162	0	0	0	0	0	0	0	471	0	0	0	0	0	0	532	0	0	0	0	0	0	923	1926	N	26	26
Specified Period	%	95%	99%	93%	0%	0%	96%	0%	0%	95%	98%	94%	0%	95%	0%	0%	0%	0%	0%	0%	0%	93%	0%	0%	0%	0%	0%	0%	99%	0%	0%	0%	0%	0%	0%	95%	95%		100%	
7:00 AM - 10:00 AM	Other Vehicles	4	2	29	0	0	35	0	0	45	5	7	0	57	0	0	0	0	0	0	0	36	0	0	0	0	0	0	7	0	0	0	0	0	0	49	92	E	73	73
One Hour Peak	%	5%	1%	7%	0%	0%	4%	0%	0%	5%	2%	6%	0%	5%	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	5%	5%		100%	
8:15 AM - 9:15 AM	Bicycles on Road	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	17	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	S	25	25
	%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		100%	
	Total	**83**	**318**	**398**	**0**	**0**	**799**	**17**	**0**	**889**	**221**	**109**	**0**	**1219**	**0**	**0**	**17**	**0**	**0**	**0**	**17**	**507**	**0**	**0**	**0**	**0**	**0**	**0**	**539**	**0**	**0**	**0**	**0**	**0**	**0**	**972**	**2035**	SW	39	39
	PHF	0.83	0.84	0.9	0	0	0.9	0.61	0	0.98	0.81	0.88	0	0.98	0	0	0.61	0	0	0	0.61	0.94	0	0	0	0	0	0	0.83	0	0	0	0	0	0	0.97	0.95		100%	
	Approach %						39%	1%						60%	0%						1%	25%						0%	26%						0%	48%		W	49	49
																																							100%	
																																							212	**212**
Peak 2	Lights	100	321	493	0	0	914	0	0	476	212	132	0	820	0	0	0	0	0	0	0	625	0	0	0	0	0	0	533	0	0	0	0	0	0	576	1734	N	12	12
Specified Period	%	95%	100%	98%	0%	0%	98%	0%	0%	94%	98%	97%	0%	96%	0%	0%	0%	0%	0%	0%	0%	98%	0%	0%	0%	0%	0%	0%	99%	0%	0%	0%	0%	0%	0%	95%	97%		100%	
11:30 AM - 1:30 PM	Other Vehicles	4	0	10	0	0	14	0	0	28	5	4	0	37	0	0	0	0	0	0	0	14	0	0	0	0	0	0	5	0	0	0	0	0	0	32	51	E	25	25
One Hour Peak	%	4%	0%	2%	0%	0%	2%	0%	0%	6%	2%	3%	0%	4%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	5%	3%		100%	
11:45 AM - 12:45 PM	Bicycles on Road	1	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	S	3	3
	%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Total	**105**	**321**	**505**	**0**	**0**	**931**	**0**	**0**	**504**	**217**	**136**	**0**	**857**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**641**	**0**	**0**	**0**	**0**	**0**	**0**	**538**	**0**	**0**	**0**	**0**	**0**	**0**	**609**	**1788**	SW	20	20
	PHF	0.91	0.94	0.96	0	0	0.96	0	0	0.85	0.88	0.79	0	0.93	0	0	0	0	0	0	0	0.97	0	0	0	0	0	0	0.91	0	0	0	0	0	0	0.87	0.98		100%	
	Approach %						52%	0%						48%	0%						0%	36%						0%	30%						0%	34%		W	12	12
																																							100%	
																																							72	**72**
Peak 3	Lights	123	470	948	0	0	1541	0	0	653	215	187	0	1055	0	0	0	0	0	0	0	1135	0	0	0	0	0	0	685	0	0	0	0	0	0	776	2596	N	19	19
Specified Period	%	96%	100%	97%	0%	0%	98%	0%	0%	96%	100%	95%	0%	96%	0%	0%	0%	0%	0%	0%	0%	97%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	96%	97%		100%	
3:00 PM - 6:00 PM	Other Vehicles	5	1	17	0	0	23	0	0	29	1	9	0	39	0	0	0	0	0	0	0	26	0	0	0	0	0	0	2	0	0	0	0	0	0	34	62	E	69	69
One Hour Peak	%	4%	0%	2%	0%	0%	1%	0%	0%	4%	0%	5%	0%	4%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	2%		100%	
3:45 PM - 4:45 PM	Bicycles on Road	0	1	8	0	0	9	5	0	0	0	0	0	0	0	0	5	0	0	0	5	8	0	0	0	0	0	0	1	0	0	0	0	0	0	0	14	S	13	13
	%	0%	0%	1%	0%	0%	1%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		100%	
	Total	**128**	**472**	**973**	**0**	**0**	**1573**	**5**	**0**	**682**	**216**	**196**	**0**	**1094**	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**1169**	**0**	**0**	**0**	**0**	**0**	**0**	**688**	**0**	**0**	**0**	**0**	**0**	**0**	**810**	**2672**	SW	38	38
	PHF	0.86	0.93	0.94	0	0	0.98	0.42	0	0.82	0.9	0.94	0	0.92	0	0	0.42	0	0	0	0.42	0.96	0	0	0	0	0	0	0.92	0	0	0	0	0	0	0.85	0.96		100%	
	Approach %						59%	0%						41%	0%						0%	44%						0%	26%						0%	30%		W	34	34
																																							100%	
																																							173	**173**

Study Name 5299277 - Catherine St/HWY 417 and O'Connor St
Start Date Tuesday, March 21, 2017 7:00 AM
End Date Tuesday, March 21, 2017 6:00 PM
Site Code 36132103

Road Volumes

TMV	Movement																													
	Southbound					Total	Westbound					Total	Northbound					Total	Northeastbound					Total	Eastbound					Total	Grand Total
Interval	R	BR	T	L	U		R	T	L	U	BL		R	T	L	U	HL		BR	U	BL	HL	HR		R	T	L	U	HR		
3/21/2017 7:00	10	65	61	0	0	136	0	149	18	0	34	201	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	338
Lights	9	62	56	0	0	127	0	141	17	0	33	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	318
Other Vehicles	1	3	5	0	0	9	0	8	1	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 7:15	13	68	74	0	0	155	0	188	21	0	37	246	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	402
Lights	12	66	71	0	0	149	0	177	20	0	37	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	383
Other Vehicles	1	2	3	0	0	6	0	11	1	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 7:30	18	94	100	0	0	212	0	191	31	0	47	269	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	481
Lights	18	94	99	0	0	211	0	181	28	0	47	256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	467
Other Vehicles	0	0	1	0	0	1	0	10	3	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/21/2017 7:45	21	79	101	0	0	201	0	212	24	0	55	291	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	493
Lights	21	78	98	0	0	197	0	206	24	0	55	285	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	482
Other Vehicles	0	1	3	0	0	4	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 8:00	26	75	113	0	0	214	0	205	20	0	59	284	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	505
Lights	24	75	110	0	0	209	0	197	20	0	59	276	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	485
Other Vehicles	2	0	3	0	0	5	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
3/21/2017 8:15	21	73	83	0	0	177	0	225	25	0	51	301	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	485
Lights	19	73	77	0	0	169	0	210	24	0	50	284	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	453
Other Vehicles	2	0	6	0	0	8	0	15	1	0	1	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
3/21/2017 8:30	17	95	111	0	0	223	0	213	24	0	68	305	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	534
Lights	16	95	105	0	0	216	0	205	24	0	67	296	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	512
Other Vehicles	1	0	6	0	0	7	0	8	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
3/21/2017 8:45	25	71	100	0	0	196	0	225	31	0	54	310	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	510
Lights	25	70	92	0	0	187	0	213	29	0	53	295	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	482
Other Vehicles	0	1	8	0	0	9	0	12	2	0	1	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
3/21/2017 9:00	20	79	104	0	0	203	0	226	29	0	48	303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	506
Lights	19	78	95	0	0	192	0	216	25	0	46	287	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	479
Other Vehicles	1	1	9	0	0	11	0	10	4	0	2	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/21/2017 9:15	26	67	82	0	0	175	0	149	22	0	46	217	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	394
Lights	24	64	76	0	0	164	0	138	19	0	45	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	366
Other Vehicles	1	3	6	0	0	10	0	11	3	0	1	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Bicycles on Road	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
3/21/2017 9:30	25	87	113	0	0	225	0	155	28	0	57	240	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	466
Lights	25	84	108	0	0	217	0	145	26	0	55	226	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	443
Other Vehicles	0	3	4	0	0	7	0	10	2	0	2	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Bicycles on Road	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
3/21/2017 9:45	23	69	100	0	0	192	0	114	26	0	51	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	383
Lights	20	69	99	0	0	188	0	105	24	0	49	178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	366
Other Vehicles	3	0	1	0	0	4	0	9	1	0	2	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Bicycles on Road	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 11:30	29	77	111	0	0	217	0	139	34	0	45	218	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	435
Lights	28	77	108	0	0	213	0	133	29	0	43	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	418
Other Vehicles	0	0	3	0	0	3	0	6	5	0	2	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Bicycles on Road	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 11:45	27	75	123	0	0	225	0	148	43	0	40	231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	456
Lights	26	75	120	0	0	221	0	142	42	0	38	222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	443
Other Vehicles	1	0	3	0	0	4	0	6	1	0	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/21/2017 12:00	25	85	132	0	0	242	0	121	30	0	62	213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	455
Lights	25	85	127	0	0	237	0	111	29	0	61	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	438
Other Vehicles	0	0	4	0	0	4	0	10	1	0	1	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Bicycles on Road	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 12:15	24	83	125	0	0	232	0	119	32	0	58	209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	441
Lights	21	83	123	0	0	227	0	112	31	0	58	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	428
Other Vehicles	2	0	1	0	0	3	0	7	1	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Bicycles on Road	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3/21/2017 12:30	29	78	125	0	0	232	0	116	31	0	57	204	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	436
Lights	28	78	123	0	0	229	0	111	30	0	55	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	425
Other Vehicles	1	0	2	0	0	3	0	5	1	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/21/2017 12:45	30	86	106	0	0	222	0	115	33	0	58	206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	428
Lights	29	82	102	0	0	213	0	113	33	0	56	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	415
Other Vehicles	0	4	4	0	0	8	0	2	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Bicycles on Road	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 13:00	28	69	112	0	0	209	0	105	30	0	58	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	402
Lights	28	69	109	0	0	206	0	103	30	0	57	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	396
Other Vehicles	0	0	2	0	0	2	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Bicycles on Road	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3/21/2017 13:15	31	72	109	0	0	212	0	124	30	0	63	217	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	429
Lights	29	70	103	0	0	202	0	117	29	0	62	208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	410
Other Vehicles	2	2	4	0	0	8	0	7	1	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Bicycles on Road	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3/21/2017 15:00	17	133	218	0	0	368	0	113	42	1	86	242	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	611
Lights	17	132	213	0	0	362	0	104	41	1	85	231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	593
Other Vehicles	0	1	3	0	0	4	0	9	1	0	1	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15

Bicycles on Road	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
3/21/2017 15:15	27	138	233	0	0	398	0	125	36	0	75	236	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	635
Lights	27	137	229	0	0	393	0	114	34	0	75	223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	616
Other Vehicles	0	1	4	0	0	5	0	11	2	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 15:30	26	134	236	0	0	396	0	129	39	0	68	236	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	632
Lights	26	134	234	0	0	394	0	121	39	0	67	227	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	621
Other Vehicles	0	0	1	0	0	1	0	8	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Bicycles on Road	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3/21/2017 15:45	37	123	238	0	0	398	0	135	47	0	56	238	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	638
Lights	37	123	231	0	0	391	0	123	44	0	55	222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	613
Other Vehicles	0	0	6	0	0	6	0	12	3	0	1	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Bicycles on Road	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
3/21/2017 16:00	26	127	247	0	0	400	0	164	50	0	60	274	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	674
Lights	24	126	246	0	0	396	0	158	48	0	60	266	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	662
Other Vehicles	2	1	1	0	0	4	0	6	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/21/2017 16:15	30	109	258	0	0	397	0	207	47	0	44	298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	695
Lights	27	108	247	0	0	382	0	201	45	0	44	290	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	672
Other Vehicles	3	0	8	0	0	11	0	6	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Bicycles on Road	0	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3/21/2017 16:30	35	113	230	0	0	378	0	176	52	0	56	284	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	665
Lights	35	113	224	0	0	372	0	171	50	0	56	277	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	649
Other Vehicles	0	0	2	0	0	2	0	5	2	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Bicycles on Road	0	0	4	0	0	4	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7
3/21/2017 16:45	47	97	229	0	0	373	0	148	33	0	47	228	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	601
Lights	46	97	222	0	0	365	0	143	32	0	47	222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	587
Other Vehicles	1	0	3	0	0	4	0	4	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Bicycles on Road	0	0	4	0	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
3/21/2017 17:00	44	102	253	0	0	399	0	185	47	0	58	290	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	689
Lights	44	102	250	0	0	396	0	182	46	0	57	285	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	681
Other Vehicles	0	0	0	0	0	0	0	3	1	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Bicycles on Road	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3/21/2017 17:15	43	91	251	0	0	385	0	229	45	0	43	317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	702
Lights	43	91	243	0	0	377	0	223	45	0	41	309	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	686
Other Vehicles	0	0	6	0	0	6	0	6	0	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Bicycles on Road	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3/21/2017 17:30	37	112	180	0	0	329	0	187	47	0	33	267	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	597
Lights	37	112	174	0	0	323	0	180	46	0	32	258	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	581
Other Vehicles	0	0	4	0	0	4	0	7	1	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Bicycles on Road	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
3/21/2017 17:45	34	102	153	0	0	289	0	190	51	0	31	272	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	561
Lights	33	101	148	0	0	282	0	186	50	0	31	267	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	549
Other Vehicles	1	1	1	0	0	3	0	4	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Bicycles on Road	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Grand Total	871	2928	4811	0	0	8610	0	5227	1098	1	1705	8031	0	38	0	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	16679

Transportation Services - Traffic Services

Work Order 35173

Turning Movement Count - Full Study Summary Report

ARGYLE AVE W @ METCALFE ST

Survey Date: Tuesday, February 10, 2015

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor 1.00

Full Study

	METCALFE ST									ARGYLE AVE W									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	0	0	1022	**1022**	0	0	0	**0**	**1022**	0	82	0	**82**	0	0	0	**0**	**82**	**1104**
08:00 09:00	0	0	1408	**1408**	0	0	0	**0**	**1408**	0	133	0	**133**	0	0	0	**0**	**133**	**1541**
09:00 10:00	0	0	933	**933**	0	0	0	**0**	**933**	0	112	0	**112**	0	0	0	**0**	**112**	**1045**
11:30 12:30	0	0	582	**582**	0	0	0	**0**	**582**	0	91	0	**91**	0	0	0	**0**	**91**	**673**
12:30 13:30	0	0	603	**603**	0	0	0	**0**	**603**	0	82	0	**82**	0	0	0	**0**	**82**	**685**
15:00 16:00	0	0	555	**555**	0	0	0	**0**	**555**	0	160	0	**160**	0	0	0	**0**	**160**	**715**
16:00 17:00	0	0	581	**581**	0	0	0	**0**	**581**	0	197	0	**197**	0	0	0	**0**	**197**	**778**
17:00 18:00	0	0	732	**732**	0	0	0	**0**	**732**	0	218	0	**218**	0	0	0	**0**	**218**	**950**
Sub Total	0	0	6416	**6416**	0	0	0	**0**	**6416**	0	1075	0	**1075**	0	0	0	**0**	**1075**	**7491**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	0	0	6416	**6416**	0	0	0	**0**	**6416**	0	1075	0	**1075**	0	0	0	**0**	**1075**	**7491**
EQ 12Hr	0	0	8918	**8918**	0	0	0	**0**	**8918**	0	1494	0	**1494**	0	0	0	**0**	**1494**	**10412**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	0	0	8918	**8918**	0	0	0	**0**	**8918**	0	1494	0	**1494**	0	0	0	**0**	**1494**	**10412**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**1.00**						
AVG 24Hr	0	0	11683	**11683**	0	0	0	**0**	**11683**	0	1957	0	**1957**	0	0	0	**0**	**1957**	**13640**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

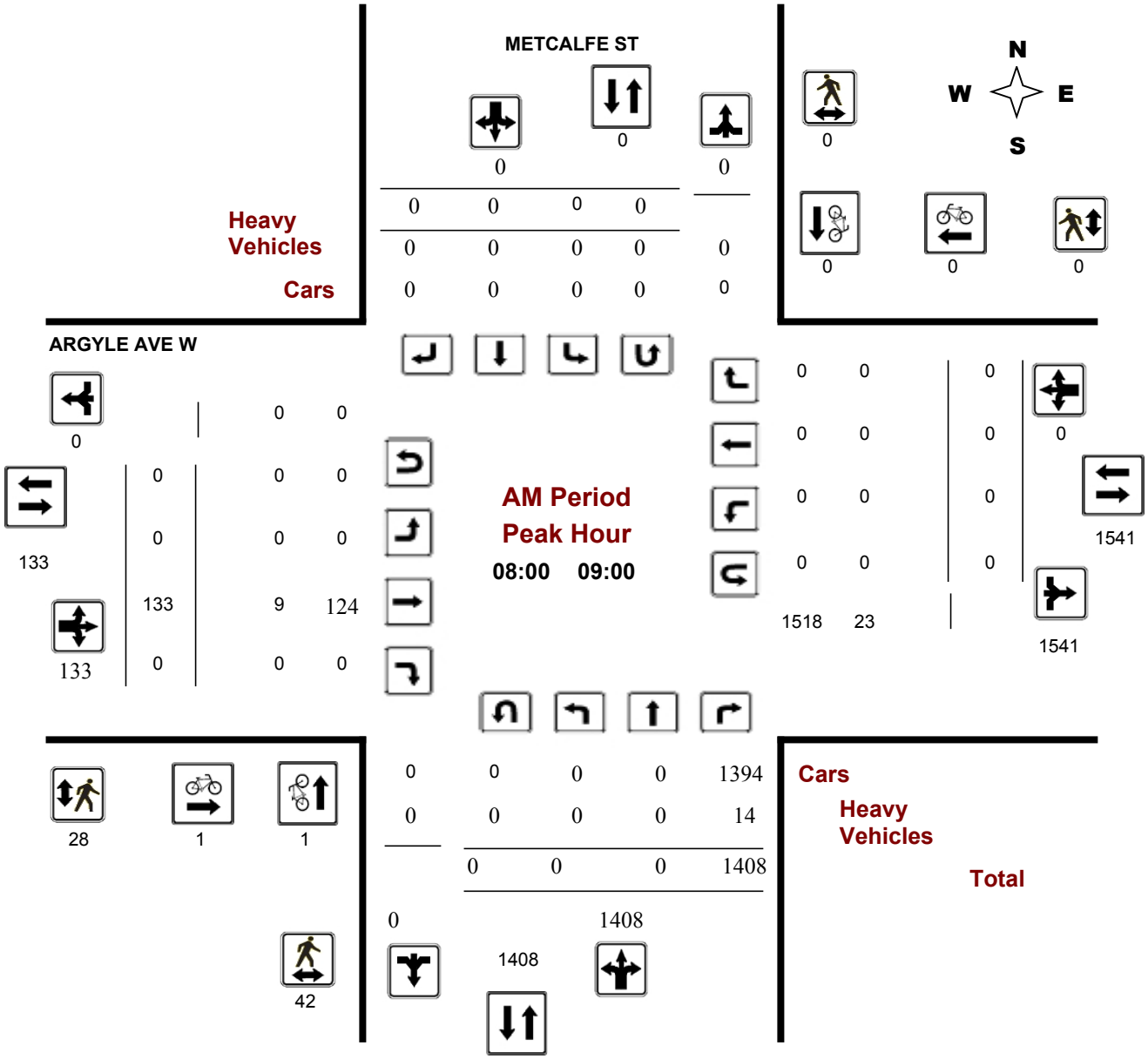
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE W @ METCALFE ST

Survey Date: Tuesday, February 10, 2015 **WO No:** 35173

Start Time: 07:00 **Device:** Miovision



Comments

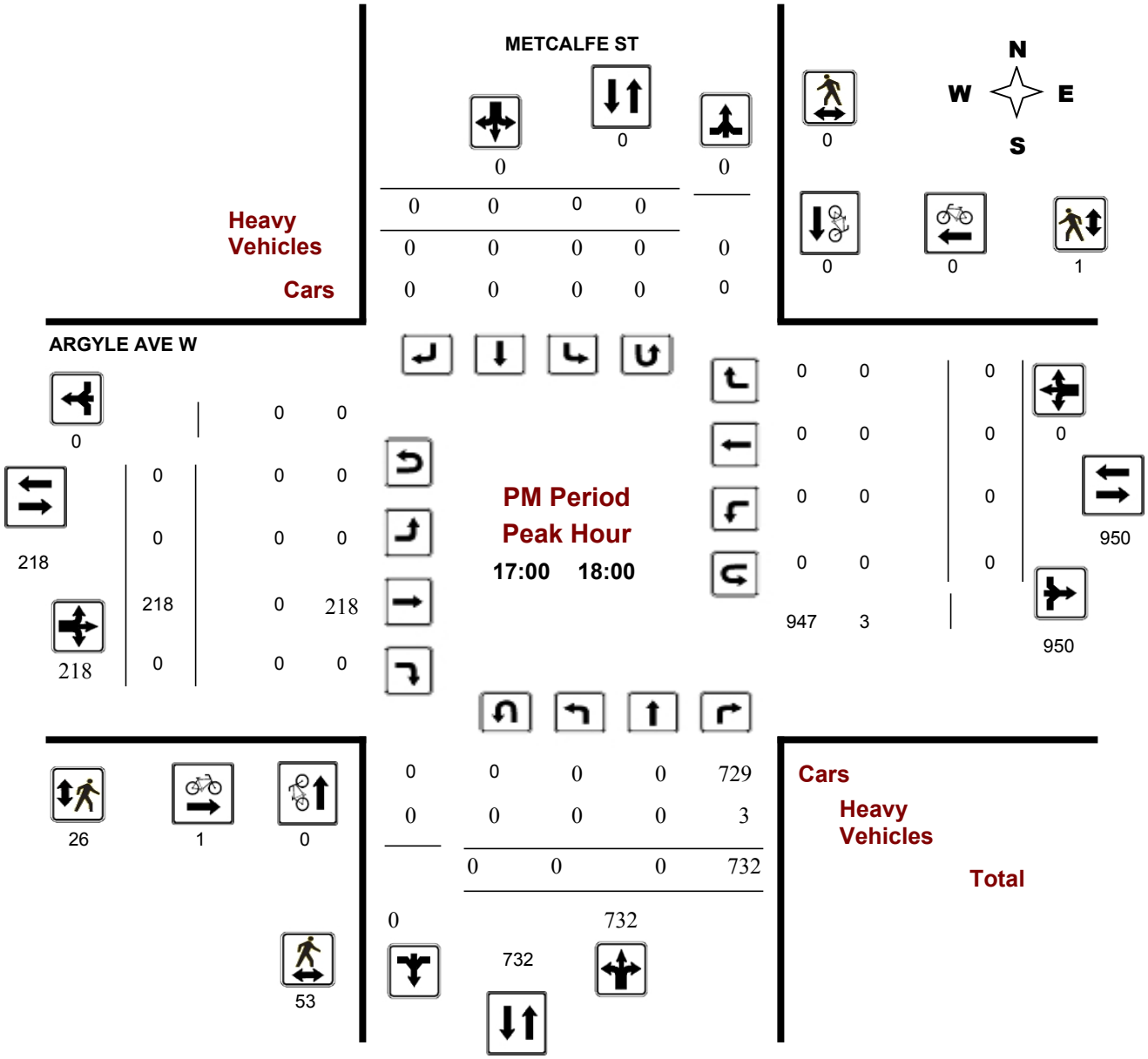
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE W @ METCALFE ST

Survey Date: Tuesday, February 10, 2015 **WO No:** 35173

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order 36831

Turning Movement Count - Full Study Summary Report

ARGYLE AVE W @ METCALFE ST

Survey Date: Tuesday, April 04, 2017

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor .90

Full Study

	METCALFE ST									ARGYLE AVE W									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	0	0	1368	**1368**	0	0	0	**0**	**1368**	0	69	0	**69**	0	0	0	**0**	**69**	**1437**
08:00 09:00	0	0	1697	**1697**	0	0	0	**0**	**1697**	0	120	0	**120**	0	0	0	**0**	**120**	**1817**
09:00 10:00	0	0	1282	**1282**	0	0	0	**0**	**1282**	0	115	0	**115**	0	0	0	**0**	**115**	**1397**
11:30 12:30	0	0	680	**680**	0	0	0	**0**	**680**	0	95	0	**95**	0	0	0	**0**	**95**	**775**
12:30 13:30	0	0	704	**704**	0	0	0	**0**	**704**	0	117	0	**117**	0	0	0	**0**	**117**	**821**
15:00 16:00	0	0	633	**633**	0	0	0	**0**	**633**	0	121	0	**121**	0	0	0	**0**	**121**	**754**
16:00 17:00	0	0	615	**615**	0	0	0	**0**	**615**	0	154	0	**154**	0	0	0	**0**	**154**	**769**
17:00 18:00	0	0	770	**770**	0	0	0	**0**	**770**	0	165	0	**165**	0	0	0	**0**	**165**	**935**
Sub Total	0	0	7749	**7749**	0	0	0	**0**	**7749**	0	956	0	**956**	0	0	0	**0**	**956**	**8705**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	0	0	7749	**7749**	0	0	0	**0**	**7749**	0	956	0	**956**	0	0	0	**0**	**956**	**8705**
EQ 12Hr	0	0	10771	**10771**	0	0	0	**0**	**10771**	0	1329	0	**1329**	0	0	0	**0**	**1329**	**12100**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	0	0	9694	**9694**	0	0	0	**0**	**9694**	0	1196	0	**1196**	0	0	0	**0**	**1196**	**10890**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	0	0	12699	**12699**	0	0	0	**0**	**12699**	0	1567	0	**1567**	0	0	0	**0**	**1567**	**14266**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

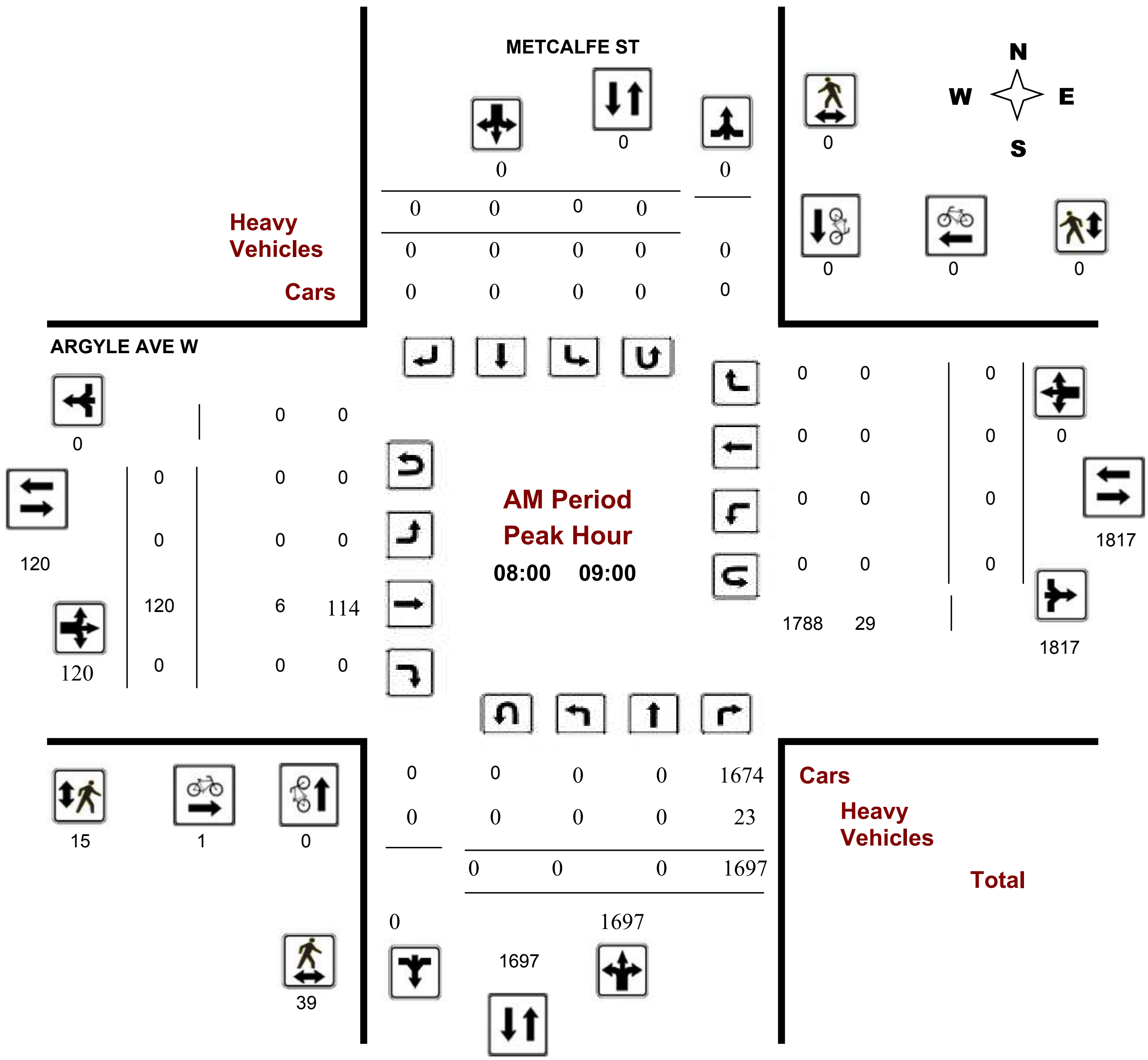
ARGYLE AVE W @ METCALFE ST

Survey Date: Tuesday, April 04, 2017

Start Time: 07:00

WO No: 36831

Device: Miovision



Comments

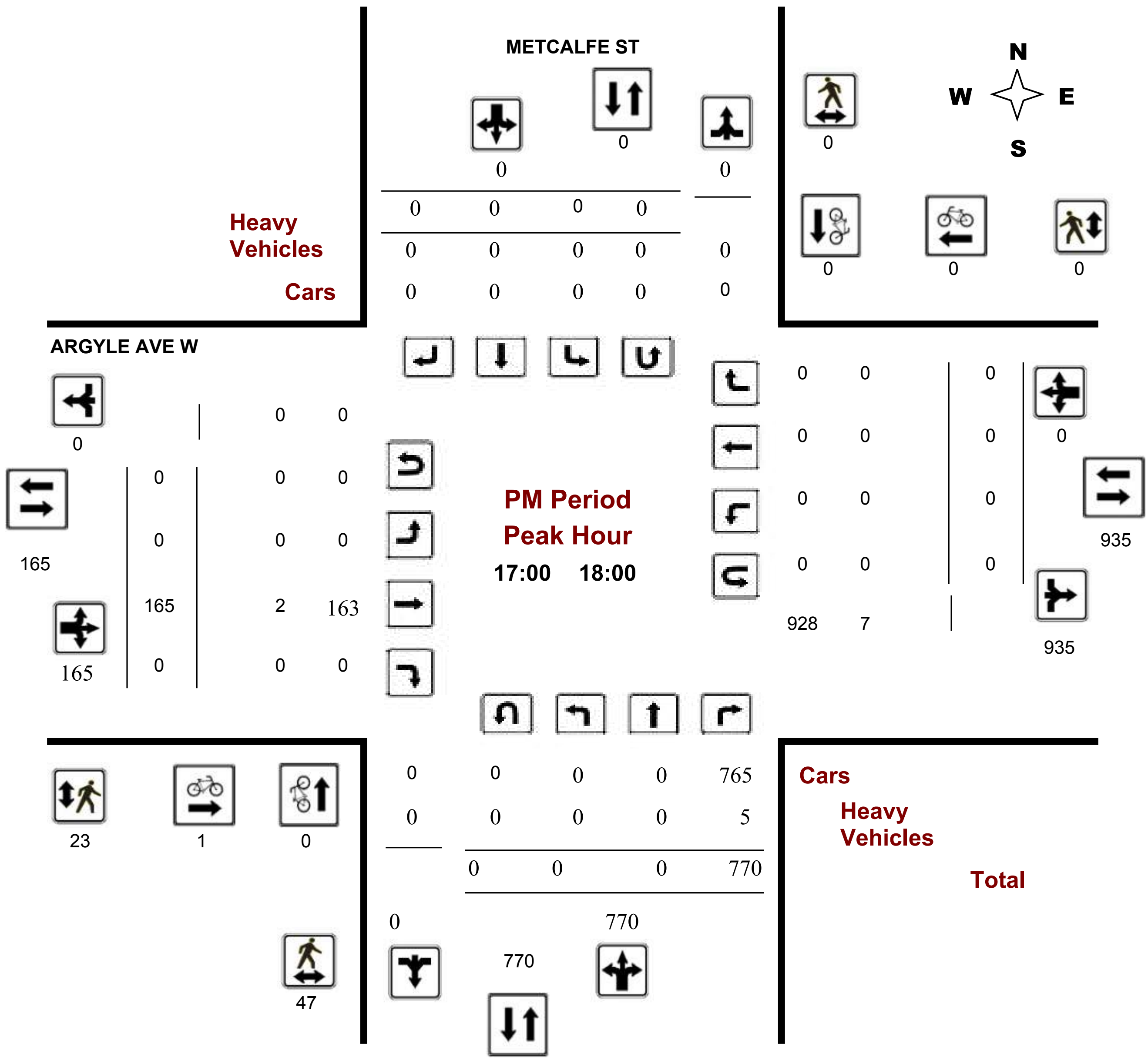
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE W @ METCALFE ST

Survey Date: Tuesday, April 04, 2017 **WO No:** 36831

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order
37768

Turning Movement Count - Full Study Summary Report

ARGYLE AVE W @ METCALFE ST

Survey Date: Thursday, April 19, 2018

Total Observed U-Turns

Northbound: 0 Southbound: 0
Eastbound: 0 Westbound: 0

AADT Factor
.90

Full Study

	METCALFE ST									ARGYLE AVE W									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
00:00 01:00	0	0	51	**51**	0	0	0	**0**	**51**	0	9	0	**9**	0	0	0	**0**	**9**	**60**
01:00 02:00	0	0	31	**31**	0	0	0	**0**	**31**	0	0	0	**0**	0	0	0	**0**	**0**	**31**
02:00 03:00	0	0	34	**34**	0	0	0	**0**	**34**	0	7	0	**7**	0	0	0	**0**	**7**	**41**
03:00 04:00	0	0	33	**33**	0	0	0	**0**	**33**	0	2	0	**2**	0	0	0	**0**	**2**	**35**
04:00 05:00	0	0	19	**19**	0	0	0	**0**	**19**	0	3	0	**3**	0	0	0	**0**	**3**	**22**
05:00 06:00	0	0	148	**148**	0	0	0	**0**	**148**	0	2	0	**2**	0	0	0	**0**	**2**	**150**
06:00 07:00	0	0	915	**915**	0	0	0	**0**	**915**	0	15	1	**16**	0	0	0	**0**	**16**	**931**
07:00 08:00	0	0	1320	**1320**	0	0	0	**0**	**1320**	0	66	0	**66**	0	0	0	**0**	**66**	**1386**
08:00 09:00	0	0	1629	**1629**	0	0	0	**0**	**1629**	0	113	0	**113**	0	0	0	**0**	**113**	**1742**
09:00 10:00	0	0	1049	**1049**	0	0	0	**0**	**1049**	0	119	0	**119**	0	0	0	**0**	**119**	**1168**
10:00 11:00	0	0	737	**737**	0	0	0	**0**	**737**	0	115	0	**115**	0	0	0	**0**	**115**	**852**
11:00 12:00	0	0	746	**746**	0	0	0	**0**	**746**	0	99	0	**99**	0	0	0	**0**	**99**	**845**
12:00 13:00	0	0	728	**728**	0	0	0	**0**	**728**	0	103	0	**103**	0	0	0	**0**	**103**	**831**
13:00 14:00	0	0	690	**690**	0	0	0	**0**	**690**	0	104	0	**104**	0	0	0	**0**	**104**	**794**
14:00 15:00	0	0	642	**642**	0	0	0	**0**	**642**	0	109	0	**109**	0	0	0	**0**	**109**	**751**
15:00 16:00	0	0	744	**744**	0	0	0	**0**	**744**	0	138	0	**138**	0	0	0	**0**	**138**	**882**
16:00 17:00	0	0	825	**825**	0	0	0	**0**	**825**	0	173	0	**173**	0	0	0	**0**	**173**	**998**
17:00 18:00	0	0	910	**910**	0	0	0	**0**	**910**	0	176	0	**176**	0	0	0	**0**	**176**	**1086**
18:00 19:00	0	0	768	**768**	0	0	0	**0**	**768**	0	182	0	**182**	0	0	0	**0**	**182**	**950**
19:00 20:00	0	0	623	**623**	0	0	0	**0**	**623**	0	115	0	**115**	0	0	0	**0**	**115**	**738**
20:00 21:00	0	0	375	**375**	0	0	0	**0**	**375**	0	69	0	**69**	0	0	0	**0**	**69**	**444**
21:00 22:00	0	0	344	**344**	0	0	0	**0**	**344**	0	55	0	**55**	0	0	0	**0**	**55**	**399**
22:00 23:00	0	0	255	**255**	0	0	0	**0**	**255**	0	39	0	**39**	0	0	0	**0**	**39**	**294**
Sub Total	0	0	13616	**13616**	0	0	0	**0**	**13616**	0	1813	1	**1814**	0	0	0	**0**	**1814**	**15430**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	0	0	13616	**13699**	0	0	0	**0**	**13699**	0	1813	1	**1834**	0	0	0	**0**	**1834**	**15533**
EQ 12Hr	0	0	19042	**19042**	0	0	0	**0**	**19042**	0	2548	1	**2549**	0	0	0	**0**	**2549**	**21591**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

AVG 12Hr	0	0	17137	**17137**	0	0	0	**0**	**17137**	0	2293	1	**2294**	0	0	0	**0**	**2294**	**19431**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **.90**

Transportation Services - Traffic Services

Work Order
37768

Turning Movement Count - Full Study Summary Report

ARGYLE AVE W @ METCALFE ST

AVG 24Hr	0	0	22450	**22450**	0	0	0	**0**	**22450**	0	3004	2	**3006**	0	0	0	**0**	**3006**	**25456**

Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor. **1.31**

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

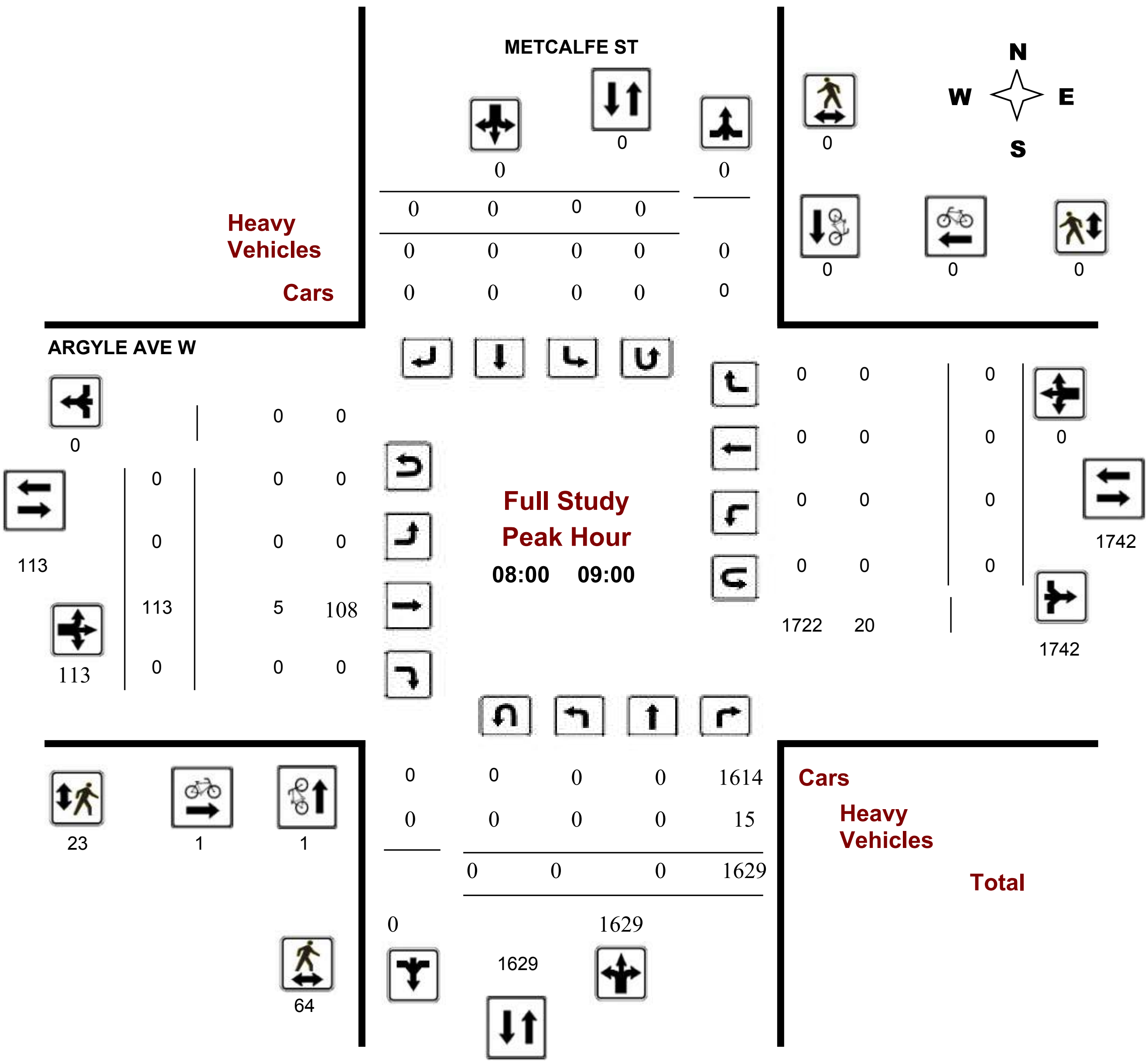
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE W @ METCALFE ST

Survey Date: Thursday, April 19, 2018 **WO No:** 37768

Start Time: 00:00 **Device:** Miovision



Comments

5464756 -- Catherine and Metcalfe -- Nov --2... - TMC

Tue Nov 26, 2019
AM Peak (8 AM - 9 AM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 729940, Location: 45.41144, -75.687534, Site Code: 39812103

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	East Westbound						Northwestbound						
Time	L	T	R	U	**App**	Ped*	HL	BL	BR	HR	**App**	Ped*	**Int**
2019-11-26 8:00AM	0	84	47	0	**131**	0	0	212	144	0	**356**	0	**643**
8:15AM	0	79	57	0	**136**	0	0	246	143	0	**389**	0	**694**
8:30AM	0	98	63	0	**161**	0	0	225	145	0	**370**	0	**700**
8:45AM	0	86	55	0	**141**	0	0	243	137	0	**380**	0	**696**
Total	0	347	222	0	**569**	0	0	926	569	0	**1495**	0	**2733**
% Approach	0%	61.0%	39.0%	0%	**-**	-	0%	61.9%	38.1%	0%	**-**	-	**-**
% Total	0%	12.7%	8.1%	0%	**20.8%**	-	0%	33.9%	20.8%	0%	**54.7%**	-	**-**
PHF	-	0.876	0.873	-	**0.875**	-	-	0.941	0.981	-	**0.961**	-	0.974
Lights and Motorcycles	0	334	219	0	**553**	-	0	895	565	0	**1460**	-	2675
% Lights and Motorcycles	0%	96.3%	98.6%	0%	**97.2%**	-	0%	96.7%	99.3%	0%	**97.7%**	-	97.9%
Heavy	0	6	1	0	**7**	-	0	31	4	0	**35**	-	49
% Heavy	0%	1.7%	0.5%	0%	**1.2%**	-	0%	3.3%	0.7%	0%	**2.3%**	-	1.8%
Bicycles on Road	0	7	2	0	**9**	-	0	0	0	0	**0**	-	9
% Bicycles on Road	0%	2.0%	0.9%	0%	**1.6%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

5464756 -- Catherine and Metcalfe -- Nov --2... - TMC

Tue Nov 26, 2019

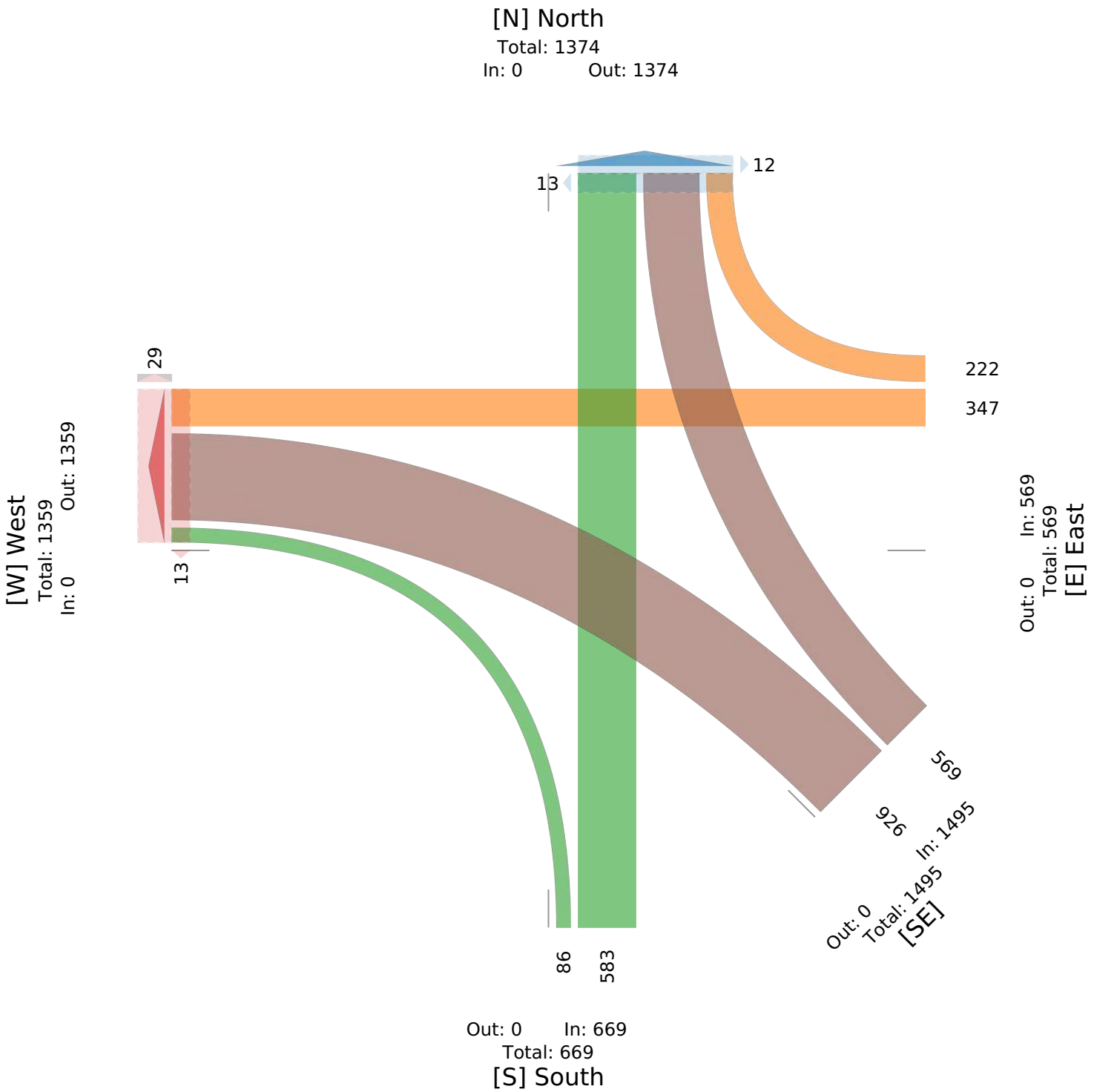
AM Peak (8 AM - 9 AM) - Overall Peak Hour

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 729940, Location: 45.41144, -75.687534, Site Code: 39812103

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5464756 -- Catherine and Metcalfe -- Nov --2... - TMC

Tue Nov 26, 2019
PM Peak (4:15 PM - 5:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 729940, Location: 45.41144, -75.687534, Site Code: 39812103

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	South Northbound						North Southbound						West Eastbound					
Time	L	T	R	U	**App**	Ped*	L	T	R	U	**App**	Ped*	L	T	R	U	**App**	Ped*
2019-11-26 4:15PM	17	52	0	0	**69**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	7
4:30PM	11	32	0	0	**43**	0	0	0	0	0	**0**	1	0	0	0	0	**0**	16
4:45PM	8	50	0	0	**58**	0	0	0	0	0	**0**	1	0	0	0	0	**0**	20
5:00PM	13	53	0	0	**66**	0	0	0	0	0	**0**	4	0	0	0	0	**0**	14
Total	49	187	0	0	**236**	0	0	0	0	0	**0**	6	0	0	0	0	**0**	57
% Approach	20.8%	79.2%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-
% Total	2.6%	10.1%	0%	0%	**12.7%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-
PHF	0.721	0.882	-	-	**0.855**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-
Lights and Motorcycles	49	187	0	0	**236**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-
% Lights and Motorcycles	100%	100%	0%	0%	**100%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-
Heavy	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-
% Heavy	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	57
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	66.7%	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	33.3%	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

5464756 -- Catherine and Metcalfe -- Nov --2... - TMC

Tue Nov 26, 2019
PM Peak (4:15 PM - 5:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 729940, Location: 45.41144, -75.687534, Site Code: 39812103

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	East Westbound						Northwestbound						
Time	L	T	R	U	**App**	Ped*	HL	BL	BR	HR	**App**	Ped*	**Int**
2019-11-26 4:15PM	0	81	38	0	**119**	0	0	249	74	0	**323**	0	**511**
4:30PM	0	62	21	0	**83**	0	0	213	90	0	**303**	0	**429**
4:45PM	0	65	34	0	**99**	0	0	215	91	0	**306**	0	**463**
5:00PM	0	81	21	0	**102**	0	0	195	94	0	**289**	0	**457**
Total	0	289	114	0	**403**	0	0	872	349	0	**1221**	0	**1860**
% Approach	0%	71.7%	28.3%	0%	**-**	-	0%	71.4%	28.6%	0%	**-**	-	-
% Total	0%	15.5%	6.1%	0%	**21.7%**	-	0%	46.9%	18.8%	0%	**65.6%**	-	-
PHF	-	0.883	0.750	-	**0.862**	-	-	0.876	0.928	-	**0.945**	-	0.914
Lights and Motorcycles	0	280	114	0	**394**	-	0	864	348	0	**1212**	-	1842
% Lights and Motorcycles	0%	96.9%	100%	0%	**97.8%**	-	0%	99.1%	99.7%	0%	**99.3%**	-	99.0%
Heavy	0	6	0	0	**6**	-	0	8	1	0	**9**	-	15
% Heavy	0%	2.1%	0%	0%	**1.5%**	-	0%	0.9%	0.3%	0%	**0.7%**	-	0.8%
Bicycles on Road	0	3	0	0	**3**	-	0	0	0	0	**0**	-	3
% Bicycles on Road	0%	1.0%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

5464756 -- Catherine and Metcalfe -- Nov --2... - TMC

Tue Nov 26, 2019

PM Peak (4:15 PM - 5:15 PM)

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 729940, Location: 45.41144, -75.687534, Site Code: 39812103

Provided by: City of Ottawa
100 Constellation Dr,
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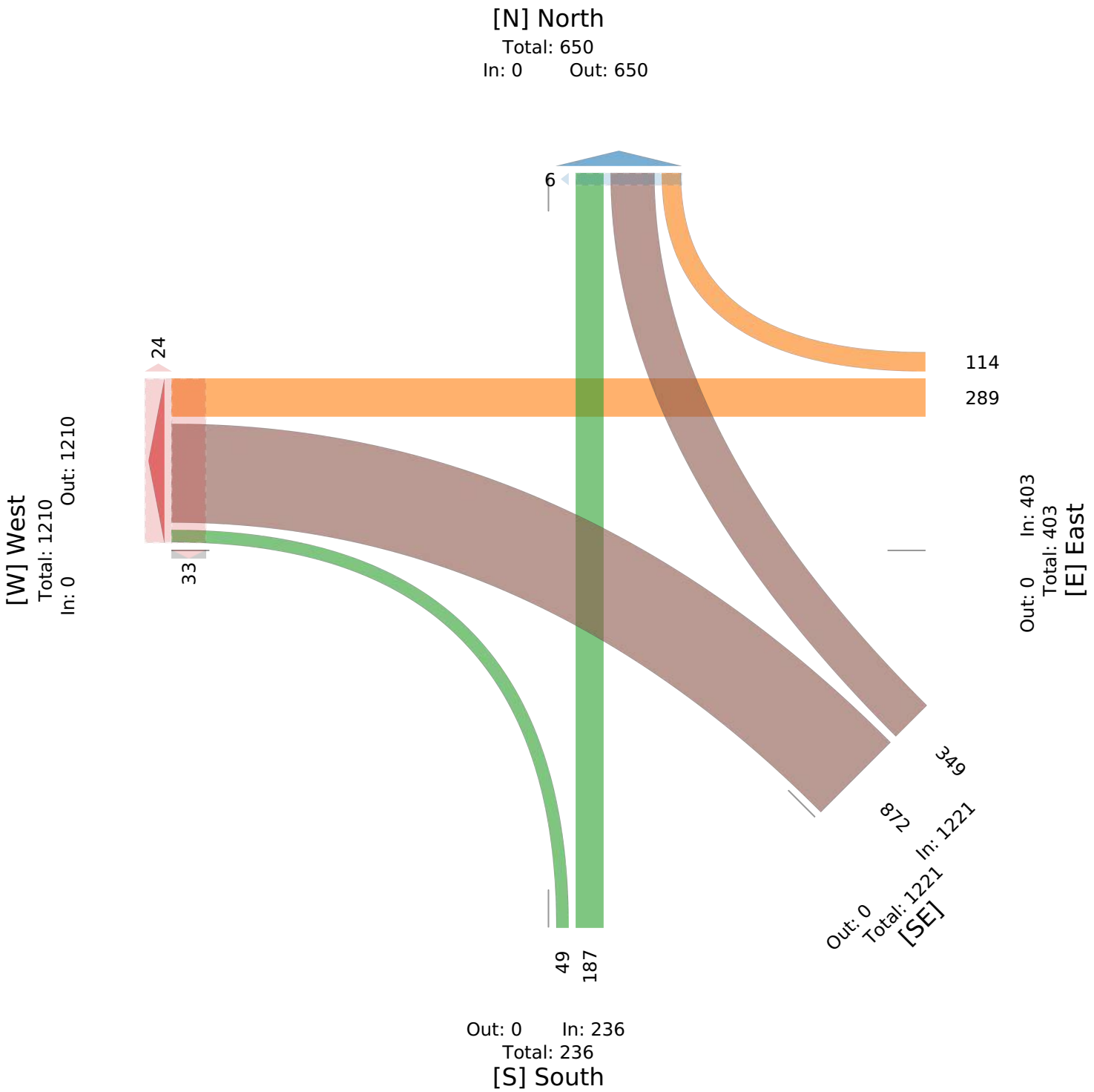


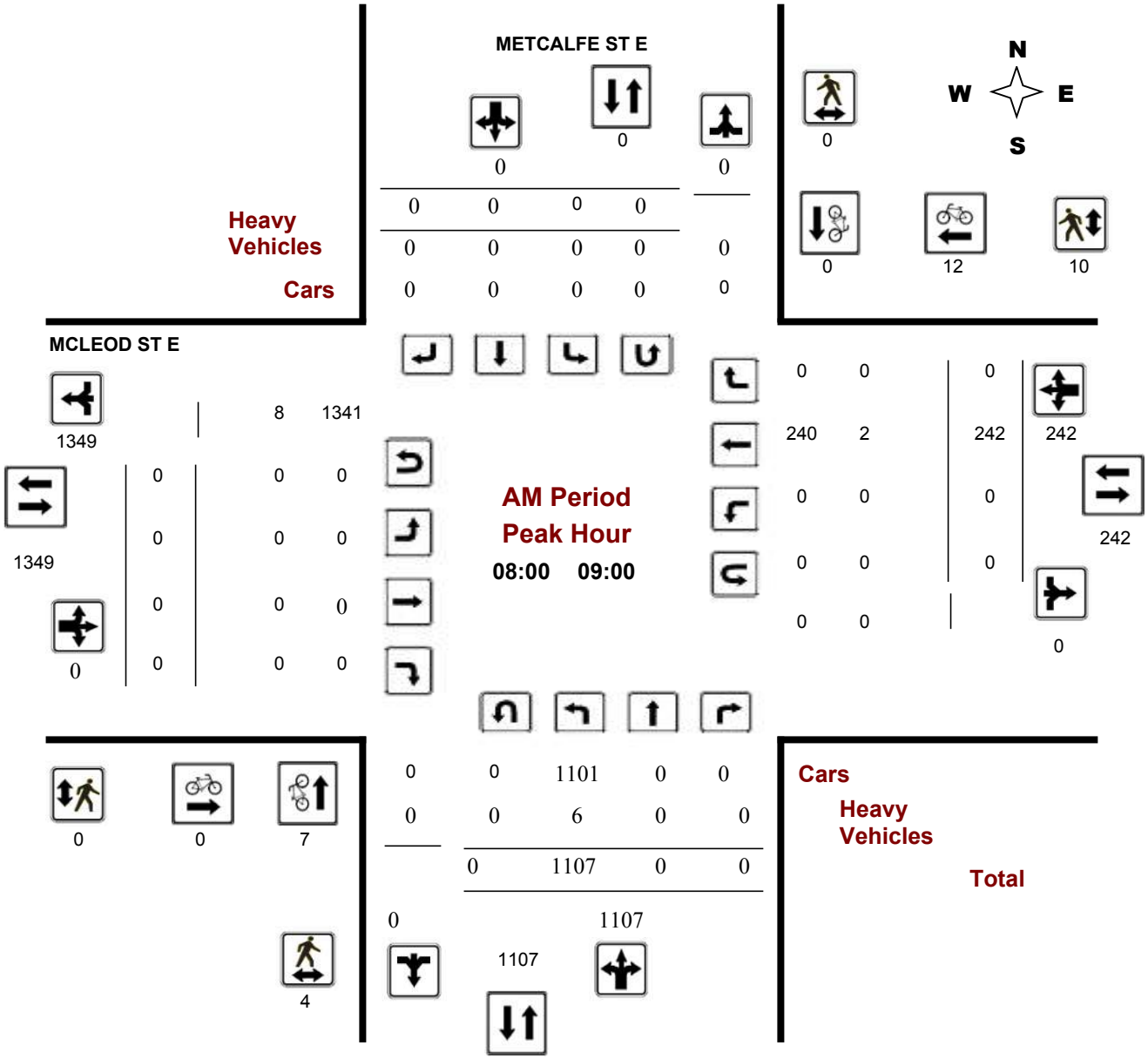
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

MCLEOD ST E @ METCALFE ST E

Survey Date: Tuesday, April 13, 2010 **WO No:** 33669

Start Time: 07:00 **Device:**



Comments

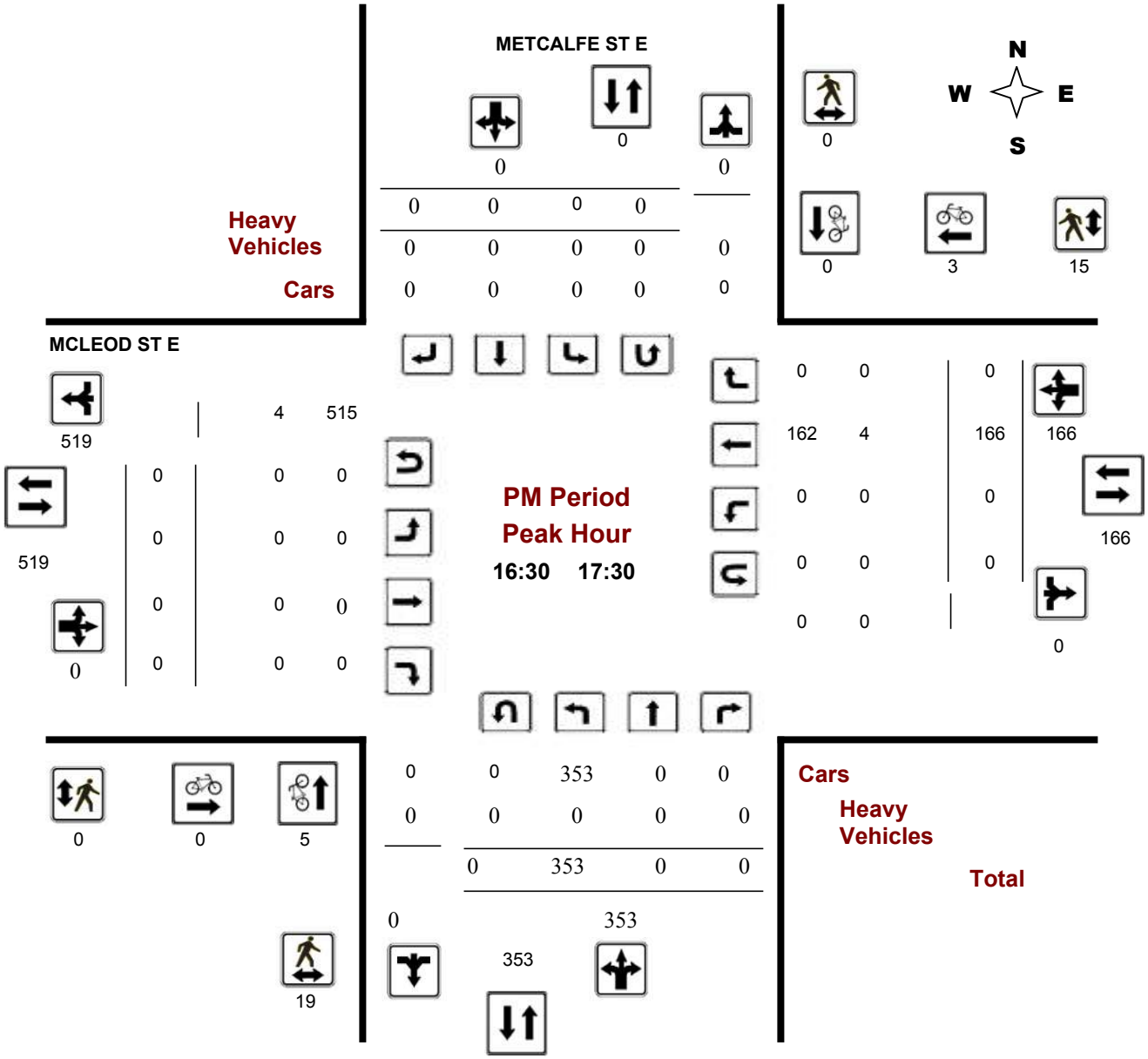
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

MCLEOD ST E @ METCALFE ST E

Survey Date: Tuesday, April 13, 2010 **WO No:** 33669

Start Time: 07:00 **Device:**



Comments

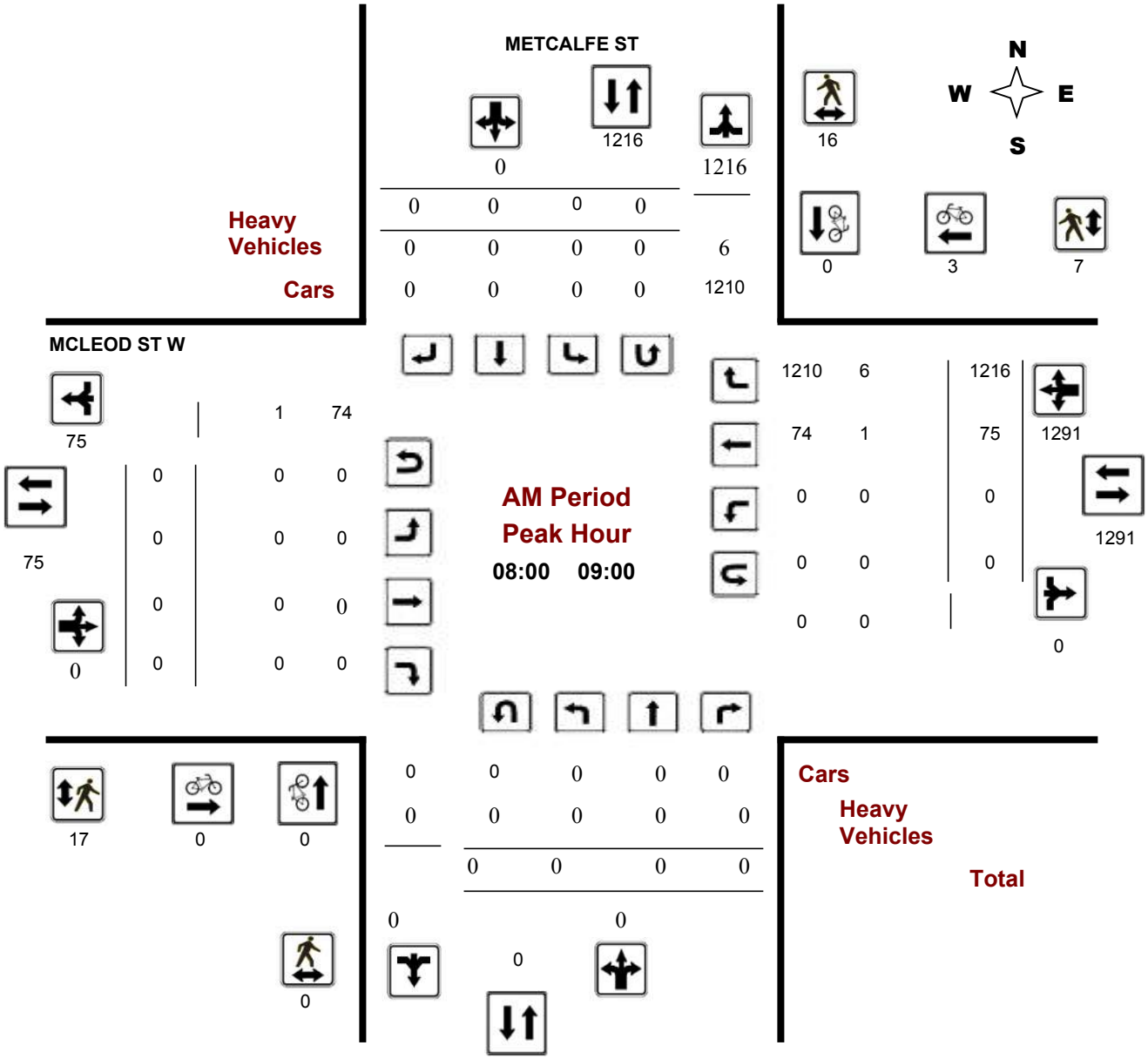
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

MCLEOD ST W @ METCALFE ST

Survey Date: Tuesday, April 04, 2017 **WO No:** 36832

Start Time: 07:00 **Device:** Miovision



Comments

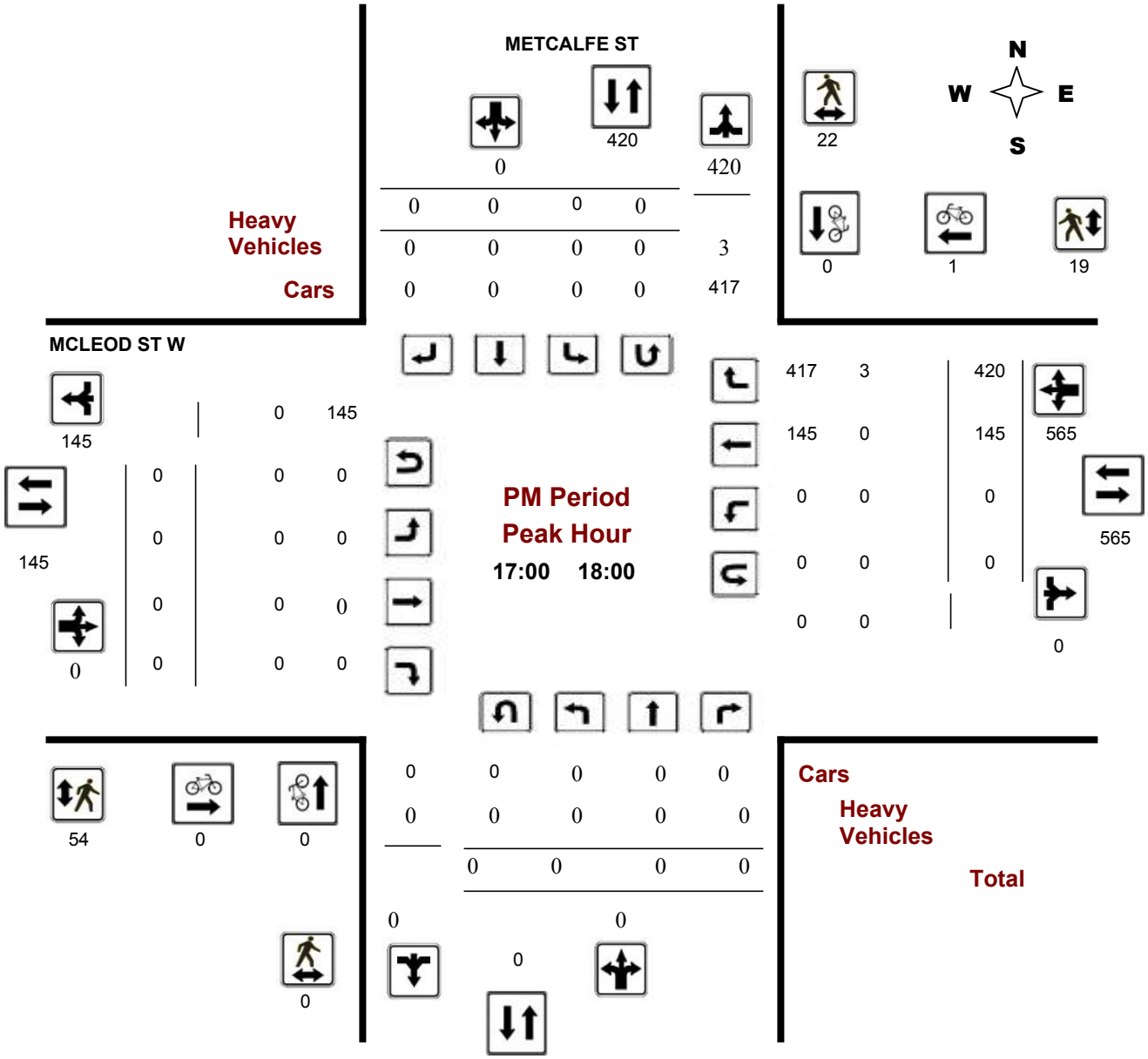
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

MCLEOD ST W @ METCALFE ST

Survey Date: Tuesday, April 04, 2017 **WO No:** 36832

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order 35909

Turning Movement Count - Full Study Summary Report

ARGYLE AVE N @ ELGIN ST

Survey Date: Wednesday, May 11, 2016

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor .90

Full Study

	ELGIN ST									ARGYLE AVE N									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	0	336	0	**336**	0	253	0	**253**	**589**	387	0	105	**492**	0	0	0	**0**	**492**	**1081**
08:00 09:00	0	426	0	**426**	0	315	0	**315**	**741**	536	0	126	**662**	0	0	0	**0**	**662**	**1403**
09:00 10:00	0	243	0	**243**	0	293	0	**293**	**536**	398	0	127	**525**	0	0	0	**0**	**525**	**1061**
11:30 12:30	0	190	0	**190**	0	384	0	**384**	**574**	319	0	162	**481**	0	0	0	**0**	**481**	**1055**
12:30 13:30	0	159	0	**159**	0	441	1	**442**	**601**	279	0	107	**386**	0	0	0	**0**	**386**	**987**
15:00 16:00	0	150	0	**150**	0	675	0	**675**	**825**	294	0	156	**450**	0	0	0	**0**	**450**	**1275**
16:00 17:00	0	185	0	**185**	0	796	0	**796**	**981**	319	0	206	**525**	0	0	0	**0**	**525**	**1506**
17:00 18:00	0	198	0	**198**	0	704	2	**706**	**904**	368	0	236	**604**	0	0	0	**0**	**604**	**1508**
Sub Total	0	1887	0	**1887**	0	3861	3	**3864**	**5751**	2900	0	1225	**4125**	0	0	0	**0**	**4125**	**9876**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	0	1887	0	**1887**	0	3861	3	**3864**	**5751**	2900	0	1225	**4125**	0	0	0	**0**	**4125**	**9876**
EQ 12Hr	0	2623	0	**2623**	0	5367	4	**5371**	**7994**	4031	0	1703	**5734**	0	0	0	**0**	**5734**	**13728**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	0	2361	0	**2361**	0	4830	4	**4834**	**7195**	3628	0	1532	**5160**	0	0	0	**0**	**5160**	**12355**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	0	3092	0	**3092**	0	6327	5	**6332**	**9424**	4753	0	2008	**6760**	0	0	0	**0**	**6760**	**16184**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

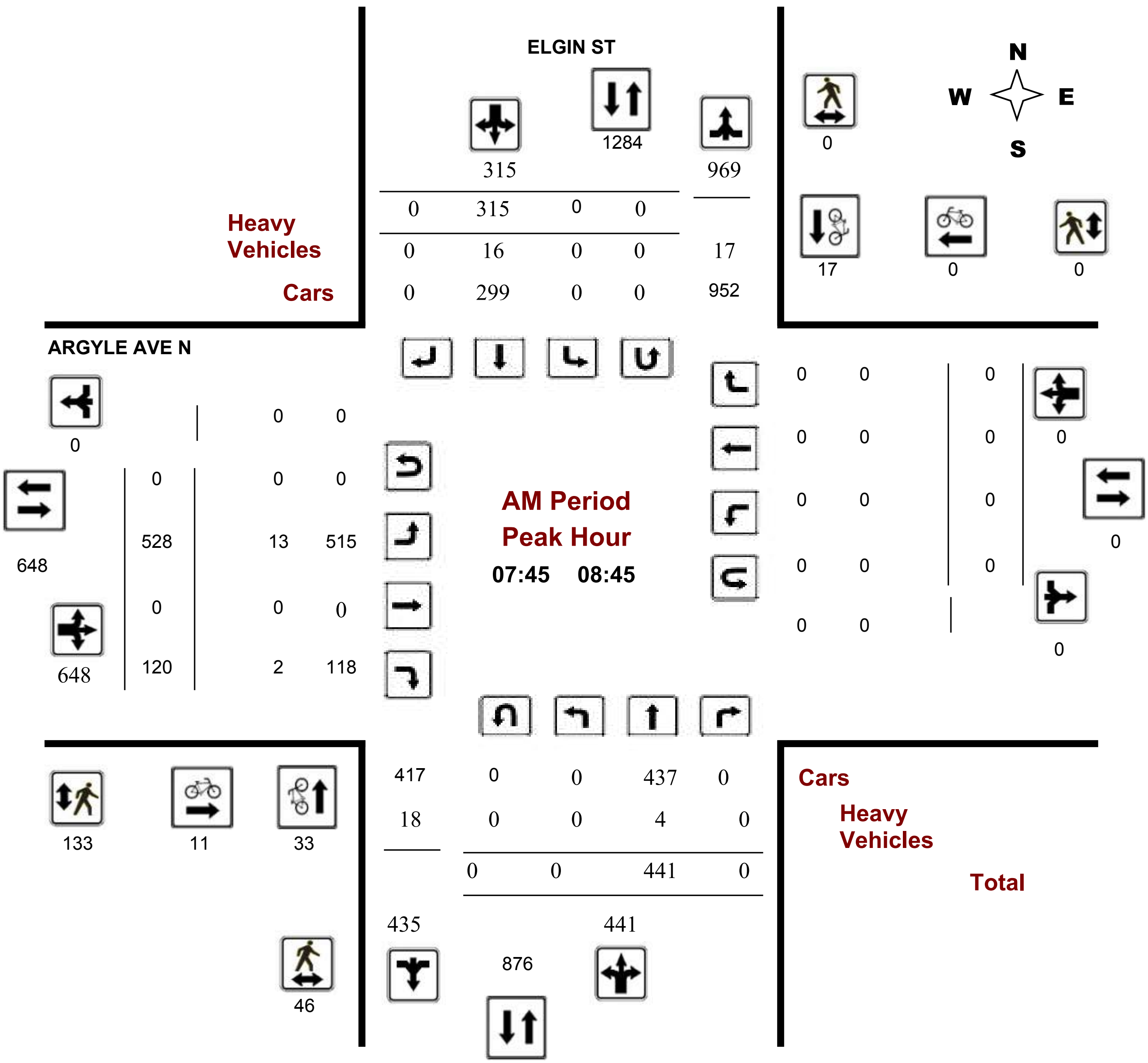
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE N @ ELGIN ST

Survey Date: Wednesday, May 11, 2016 **WO No:** 35909

Start Time: 07:00 **Device:** Miovision



Comments

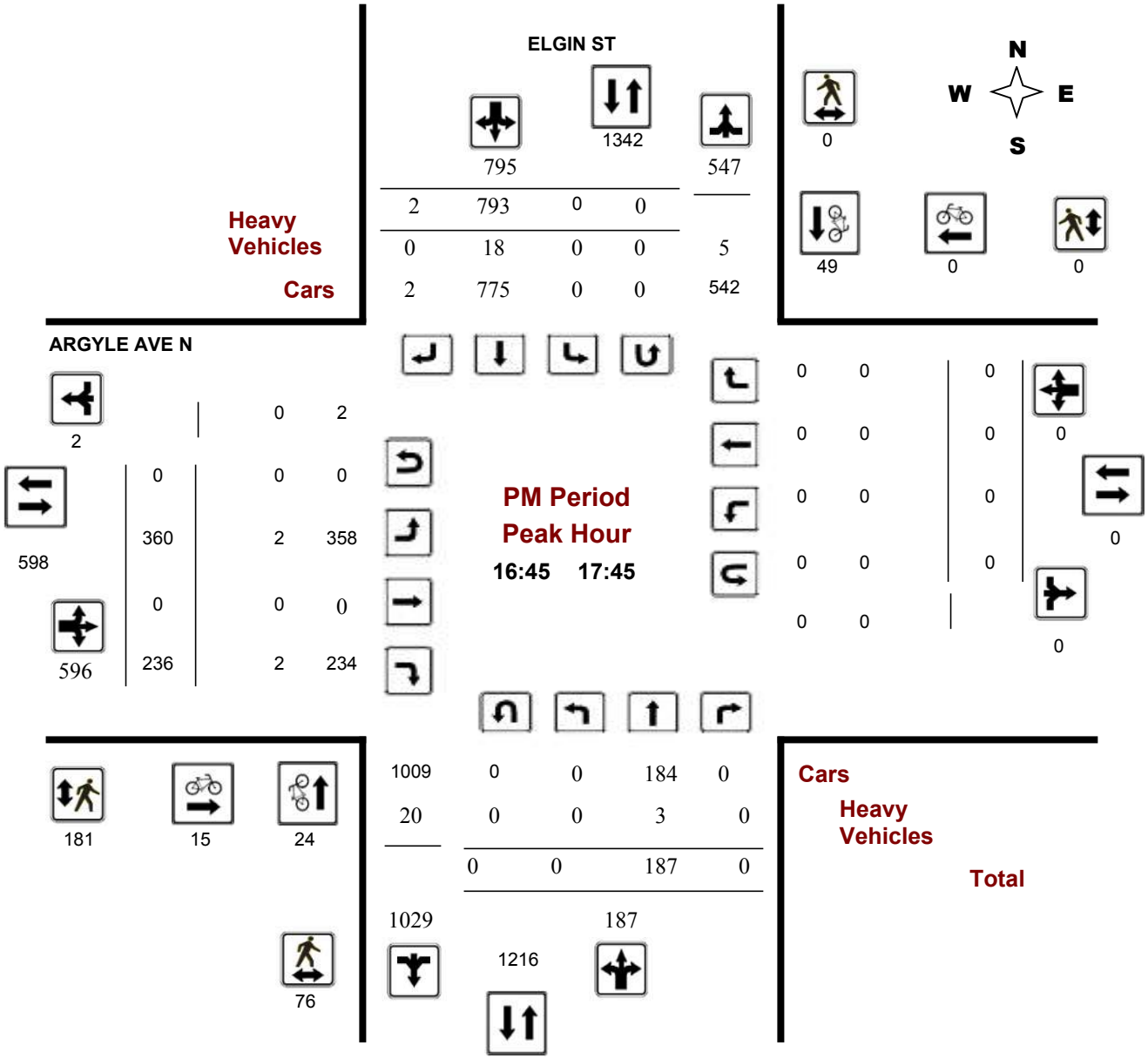
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE N @ ELGIN ST

Survey Date: Wednesday, May 11, 2016 **WO No:** 35909

Start Time: 07:00 **Device:** Miovision



Comments

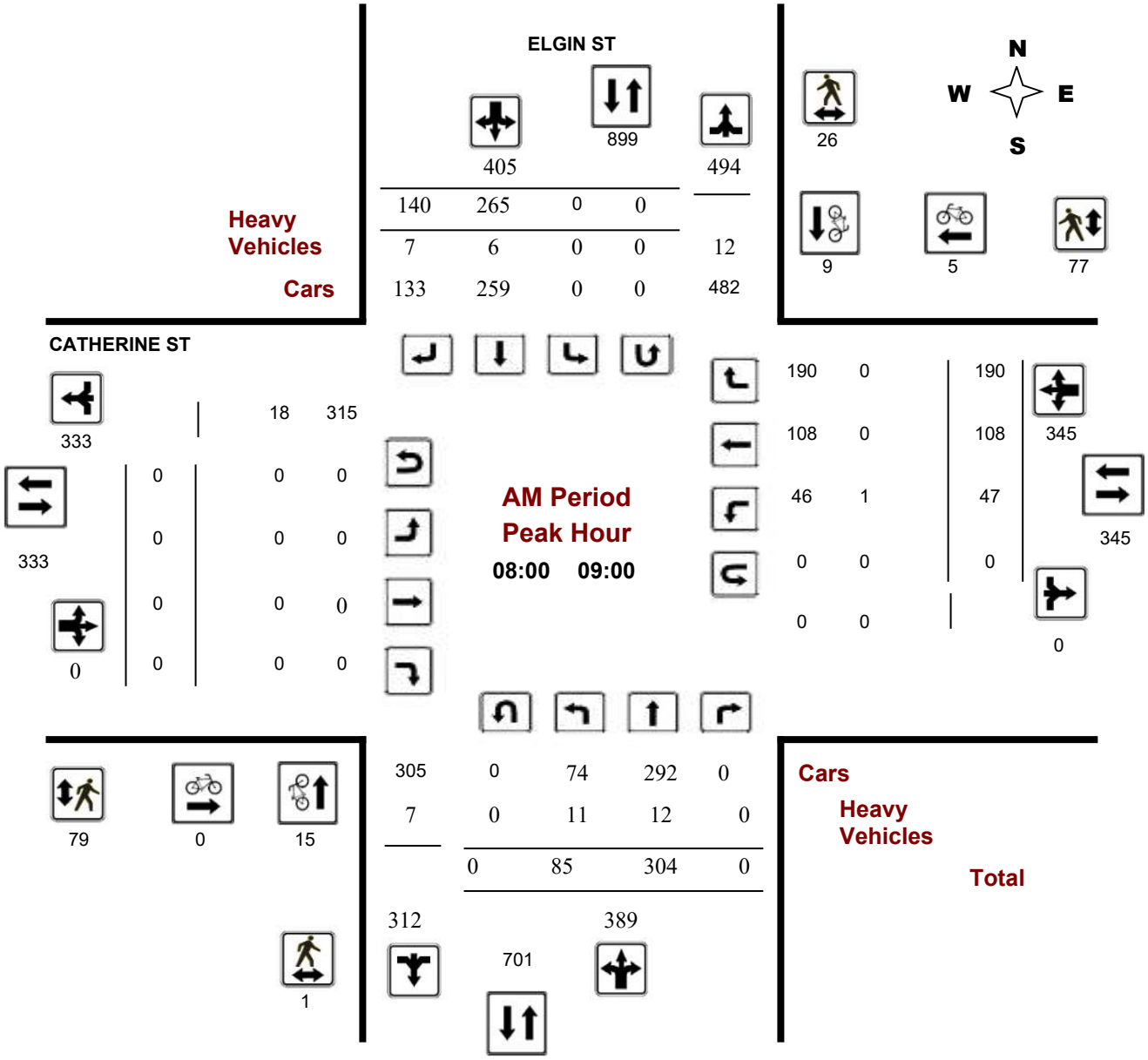
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

CATHERINE ST @ ELGIN ST

Survey Date: Wednesday, April 19, 2017 **WO No:** 36929

Start Time: 07:00 **Device:** Miovision



Comments

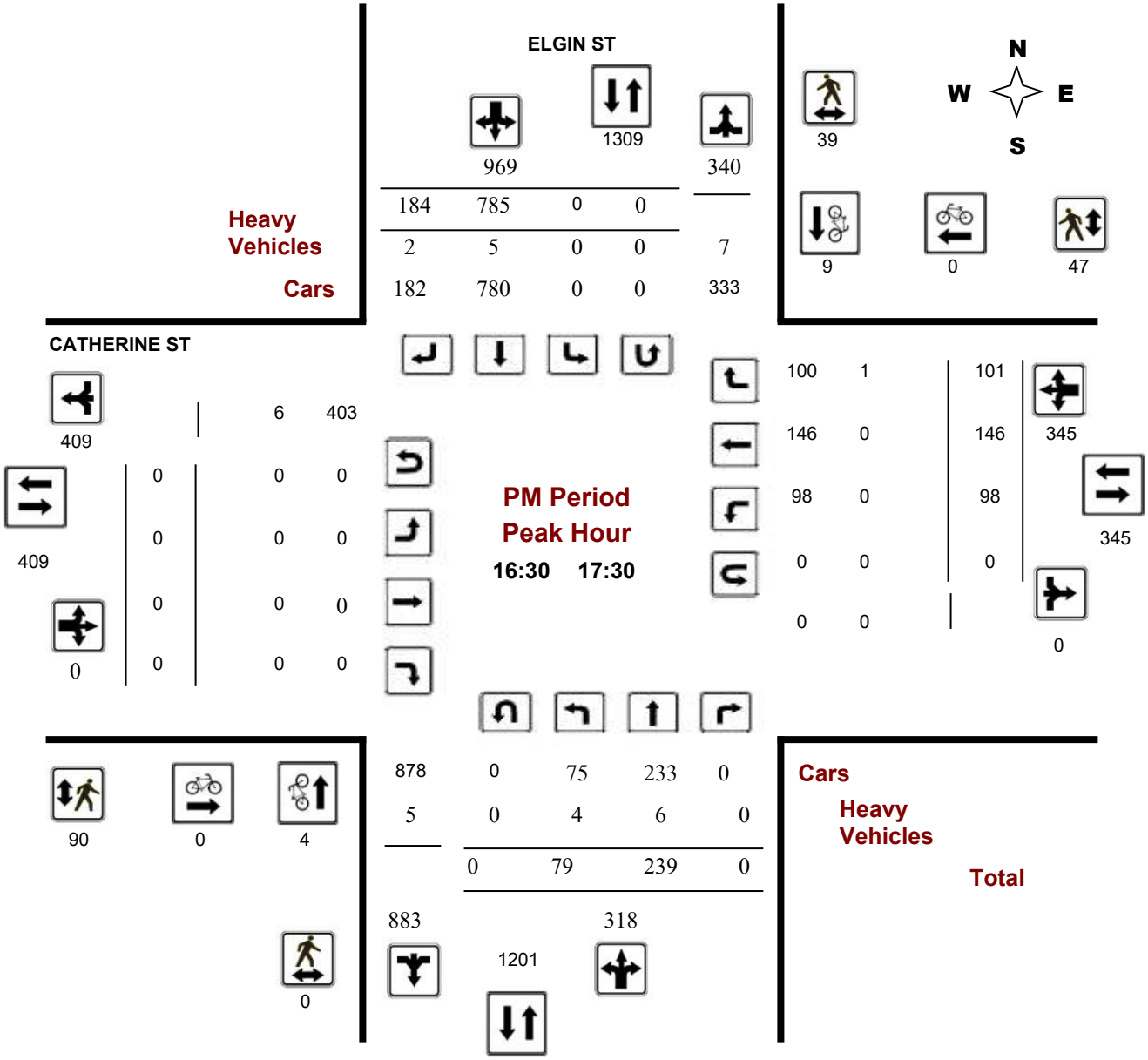
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

CATHERINE ST @ ELGIN ST

Survey Date: Wednesday, April 19, 2017 **WO No:** 36929

Start Time: 07:00 **Device:** Miovision



Comments

APPENDIX E

Collision Records

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: ARGYLE AVE @ O'CONNOR ST

Traffic Control: Traffic signal **Total Collisions:** 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Feb-04, Wed,14:16	Snow	Rear end	P.D. only	Loose snow	South	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2015-Feb-11, Wed,12:06	Clear	Angle	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2015-Mar-05, Thu,13:19	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Apr-10, Fri,15:00	Rain	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2015-Jun-26, Fri,16:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2015-Sep-17, Thu,09:36	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2015-Oct-24, Sat,09:06	Clear	SMV other	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Pedestrian	1
2015-Nov-06, Fri,19:57	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Mar-16, Wed,15:53	Clear	Turning movement	P.D. only	Dry	South	Turning left	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Apr-28, Thu,10:29	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Ambulance	Other motor vehicle	
2016-Nov-30, Wed,14:11	Rain	SMV other	P.D. only	Wet	South	Turning left	Truck - closed	Other	0
2017-Apr-27, Thu,15:10	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2017-May-05, Fri,20:47	Rain	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: ARGYLE AVE @ O'CONNOR ST

Traffic Control: Traffic signal **Total Collisions:** 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Sep-01, Fri,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0
2017-Nov-13, Mon,17:30	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2018-Jan-28, Sun,14:00	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	
2018-May-14, Mon,10:18	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-03, Fri,11:25	Clear	Angle	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-30, Thu,11:03	Clear	Sideswipe	Non-fatal injury	Dry	South	Going ahead	Bicycle	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Cyclist	
2018-Sep-04, Tue,05:35	Clear	SMV unattended vehicle	P.D. only	Dry	East	Going ahead	Police vehicle	Unattended vehicle	0
2018-Nov-18, Sun,11:00	Clear	Sideswipe	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-11, Fri,09:32	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	
2019-Feb-04, Mon,19:19	Snow	Sideswipe	P.D. only	Slush	East	Going ahead	Ambulance	Other motor vehicle	0
					East	Unknown	Unknown	Other motor vehicle	
2019-Feb-18, Mon,01:10	Clear	Angle	P.D. only	Ice	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2019-Mar-21, Thu,13:45	Clear	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: ARGYLE AVE @ O'CONNOR ST

Traffic Control: Traffic signal **Total Collisions:** 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Sep-17, Tue,17:16	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	

Location: ARGYLE AVE N @ ELGIN ST

Traffic Control: Traffic signal **Total Collisions:** 9

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Feb-11, Wed,08:25	Clear	Sideswipe	P.D. only	Packed snow	East	Turning left	Truck - dump	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2015-Sep-09, Wed,18:05	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jul-01, Fri,15:30	Clear	Sideswipe	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2016-Aug-01, Mon,13:15	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Oct-27, Thu,13:46	Clear	SMV other	P.D. only	Dry	East	Going ahead	Unknown	Pedestrian	1
2018-May-07, Mon,07:45	Clear	Angle	P.D. only	Dry	East	Turning left	Passenger van	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jul-11, Wed,07:44	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Bicycle	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Cyclist	
2018-Oct-13, Sat,17:03	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Mar-18, Mon,08:38	Clear	Other	P.D. only	Dry	West	Reversing	Truck and trailer	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: ARGYLE AVE S @ ELGIN ST

Traffic Control: Stop sign **Total Collisions:** 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Aug-07, Sun,14:22	Clear	Angle	P.D. only	Dry	South	Turning left	Passenger van	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Jan-18, Wed,14:17	Snow	Rear end	P.D. only	Packed snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Feb-11, Sat,05:00	Snow	Angle	P.D. only	Packed snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jun-19, Tue,10:01	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-26, Mon,17:10	Rain	SMV other	Non-fatal injury	Wet	South	Turning left	Automobile, station wagon	Pedestrian	1

Location: ARGYLE AVE W @ METCALFE ST

Traffic Control: Traffic signal **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jul-24, Fri,12:50	Clear	Sideswipe	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jun-22, Wed,07:47	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2017-Mar-06, Mon,18:56	Freezing Rain	Sideswipe	P.D. only	Ice	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Jul-12, Wed,23:30	Rain	SMV other	Non-fatal injury	Wet	North	Turning right	Automobile, station wagon	Curb	0

Location: CATHERINE ST @ ELGIN ST

Traffic Control: Traffic signal **Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST @ ELGIN ST

Traffic Control: Traffic signal **Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Feb-04, Wed,14:57	Snow	Rear end	Non-fatal injury	Loose snow	North	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Feb-18, Wed,13:00	Clear	Angle	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-May-31, Sun,18:58	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-Jan-12, Tue,19:58	Snow	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-Jan-30, Sat,23:21	Clear	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-Apr-05, Tue,09:58	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
2016-Apr-28, Thu,17:29	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Dec-08, Thu,19:42	Snow	Rear end	P.D. only	Loose snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Dec-16, Fri,18:10	Clear	Turning movement	Non-fatal injury	Slush	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2016-Dec-23, Fri,06:39	Clear	Angle	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Feb-15, Wed,08:20	Snow	Sideswipe	P.D. only	Loose snow	West	Turning left	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Feb-15, Wed,19:11	Snow	Sideswipe	P.D. only	Loose snow	West	Turning right	Unknown	Other motor vehicle	0
					West	Overtaking	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST @ ELGIN ST

Traffic Control: Traffic signal **Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Feb-20, Mon,13:15	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jun-06, Tue,04:00	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jul-17, Mon,15:31	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	
2017-Nov-16, Thu,12:41	Clear	SMV other	P.D. only	Dry	West	Turning left	Automobile, station wagon	Ran off road	0
2017-Nov-23, Thu,17:59	Clear	Angle	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Dec-23, Sat,14:21	Snow	Angle	Non-fatal injury	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: CATHERINE ST @ METCALFE ST

Traffic Control: Traffic signal **Total Collisions:** 44

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jan-25, Sun,16:24	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Feb-21, Sat,21:23	Snow	Rear end	P.D. only	Packed snow	West	Slowing or stopping	Police vehicle	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2015-Apr-17, Fri,17:20	Clear	Turning movement	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2015-Jun-14, Sun,22:20	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Overtaking	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST @ METCALFE ST

Traffic Control: Traffic signal **Total Collisions:** 44

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jul-29, Wed,11:52	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Stopped	Police vehicle	Other motor vehicle	
2015-Aug-12, Wed,18:00	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2015-Aug-20, Thu,16:29	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Aug-28, Fri,12:09	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Sep-09, Wed,13:59	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2015-Sep-10, Thu,08:23	Clear	Rear end	P.D. only	Dry	West	Going ahead	Truck - dump	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Oct-22, Thu,11:50	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Dec-10, Thu,18:00	Clear	Turning movement	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jan-11, Mon,10:19	Snow	Rear end	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Municipal transit bus	Other motor vehicle	
2016-Oct-06, Thu,09:35	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Nov-27, Sun,19:30	Clear	Turning movement	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2016-Dec-23, Fri,07:57	Clear	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Changing lanes	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST @ METCALFE ST

Traffic Control: Traffic signal **Total Collisions:** 44

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-06, Fri,20:00	Clear	Sideswipe	P.D. only	Wet	East	Unknown	Pick-up truck	Other motor vehicle	0
					East	Unknown	Truck and trailer	Other motor vehicle	
2017-Feb-01, Wed,20:24	Snow	Angle	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Apr-01, Sat,18:51	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2017-Jul-17, Mon,16:00	Clear	Rear end	P.D. only	Dry	West	Unknown	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jul-21, Fri,17:10	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-04, Mon,13:00	Clear	Angle	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2017-Oct-09, Mon,19:40	Clear	Rear end	P.D. only	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Nov-06, Mon,13:23	Clear	Angle	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Truck - dump	Other motor vehicle	
2017-Nov-30, Thu,15:25	Rain	Sideswipe	P.D. only	Wet	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2017-Dec-08, Fri,09:12	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jan-05, Fri,06:31	Clear	Rear end	P.D. only	Slush	West	Going ahead	Snow plow	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST @ METCALFE ST

Traffic Control: Traffic signal **Total Collisions:** 44

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Feb-12, Mon,16:19	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	
2018-Jun-11, Mon,09:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-13, Mon,18:02	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Delivery van	Other motor vehicle	
2018-Aug-23, Thu,12:10	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Truck - tractor	Other motor vehicle	
2018-Sep-14, Fri,19:00	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Unknown	Other motor vehicle	0
					North	Unknown	Automobile, station wagon	Other motor vehicle	
2018-Nov-02, Fri,11:45	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-05, Mon,12:27	Rain	SMV other	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Pedestrian	1
2018-Nov-21, Wed,21:23	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Police vehicle	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-28, Wed,12:58	Clear	Angle	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Tow truck	Other motor vehicle	
2019-Jan-05, Sat,18:30	Clear	Angle	P.D. only	Wet	North	Going ahead	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-16, Wed,12:30	Clear	Turning movement	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-19, Sat,21:34	Clear	Angle	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST @ METCALFE ST

Traffic Control: Traffic signal **Total Collisions:** 44

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Mar-19, Tue,17:21	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Apr-02, Tue,14:30	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Unknown	Unknown	Other motor vehicle	
2019-May-11, Sat,15:32	Clear	SMV unattended vehicle	P.D. only	Dry	West	Turning right	Bus (other)	Unattended vehicle	0
2019-Jul-21, Sun,14:43	Clear	Other	P.D. only	Dry	East	Reversing	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Dec-04, Wed,14:21	Clear	Other	P.D. only	Dry	South	Reversing	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Passenger van	Other motor vehicle	

Location: CATHERINE ST/HWY 417 O'CONN IC119BR76 @ O'CONN

Traffic Control: Traffic signal **Total Collisions:** 75

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jan-03, Sat,12:40	Snow	SMV other	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Ran off road	0
2015-Jan-04, Sun,18:43	Clear	Angle	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Jan-15, Thu,10:39	Clear	Turning movement	P.D. only	Wet	West	Turning left	Truck and trailer	Other motor vehicle	0
					West	Turning left	Passenger van	Other motor vehicle	
2015-Jan-16, Fri,19:00	Clear	Rear end	P.D. only	Slush	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2015-Jan-22, Thu,10:01	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	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST/HWY 417 O'CONN IC119BR76 @ O'CONN

Traffic Control: Traffic signal **Total Collisions:** 75

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jan-27, Tue,08:10	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Feb-02, Mon,10:04	Snow	SMV other	P.D. only	Packed snow	West	Going ahead	Automobile, station wagon	Pole (sign, parking meter)	0
2015-Mar-07, Sat,10:38	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2015-Mar-13, Fri,14:12	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2015-Mar-30, Mon,08:10	Rain	Sideswipe	P.D. only	Wet	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Apr-26, Sun,20:58	Clear	SMV other	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Pole (sign, parking meter)	0
2015-May-01, Fri,14:58	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-May-07, Thu,22:04	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2015-Jun-09, Tue,11:20	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Police vehicle	Other motor vehicle	
2015-Jun-10, Wed,21:38	Clear	Angle	P.D. only	Wet	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Jul-01, Wed,12:30	Rain	Angle	P.D. only	Wet	West	Going ahead	Pick-up truck	Ran off road	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2015-Jul-03, Fri,15:20	Clear	Turning movement	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST/HWY 417 O'CONN IC119BR76 @ O'CONN

Traffic Control: Traffic signal **Total Collisions:** 75

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jul-23, Thu,16:57	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Passenger van	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2015-Aug-14, Fri,11:53	Clear	SMV other	Non-fatal injury	Dry	South	Turning right	Pick-up truck	Pedestrian	1
2015-Aug-18, Tue,16:07	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle	0
					West	Turning left	Pick-up truck	Other motor vehicle	
2015-Aug-26, Wed,13:22	Clear	Sideswipe	P.D. only	Dry	West	Turning left	Truck - dump	Other motor vehicle	0
					West	Turning left	Police vehicle	Other motor vehicle	
2015-Oct-22, Thu,10:38	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Truck - dump	Other motor vehicle	0
					West	Changing lanes	Automobile, station wagon	Other motor vehicle	
2015-Nov-29, Sun,14:28	Clear	Angle	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Dec-01, Tue,15:50	Rain	Sideswipe	P.D. only	Wet	West	Changing lanes	Truck and trailer	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Dec-23, Wed,18:09	Rain	Angle	Non-fatal injury	Wet	South	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jan-19, Tue,14:18	Clear	Sideswipe	P.D. only	Loose snow	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Jan-25, Mon,20:06	Clear	Angle	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jan-28, Thu,16:00	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Feb-18, Thu,08:23	Snow	SMV other	P.D. only	Ice	South	Going ahead	Automobile, station wagon	Skidding/sliding	0
2016-May-14, Sat,13:44	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST/HWY 417 O'CONN IC119BR76 @ O'CONN

Traffic Control: Traffic signal **Total Collisions:** 75

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-May-30, Mon,09:35	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jul-04, Mon,16:21	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Truck and trailer	Other motor vehicle	
2016-Jul-11, Mon,19:04	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jul-31, Sun,09:40	Clear	Other	P.D. only	Dry	East	Reversing	Pick-up truck	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2016-Aug-14, Sun,01:38	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Oct-02, Sun,08:59	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Oct-13, Thu,09:06	Rain	Sideswipe	P.D. only	Wet	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2016-Oct-24, Mon,10:25	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Truck and trailer	Other motor vehicle	0
					West	Going ahead	Truck - tank	Other motor vehicle	
2016-Dec-08, Thu,17:16	Snow	Sideswipe	P.D. only	Wet	South	Changing lanes	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jan-31, Tue,14:50	Clear	Rear end	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Feb-11, Sat,15:35	Clear	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Mar-27, Mon,06:22	Freezing Rain	Angle	P.D. only	Wet	West	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST/HWY 417 O'CONN IC119BR76 @ O'CONN

Traffic Control: Traffic signal **Total Collisions:** 75

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Apr-19, Wed,16:41	Rain	Sideswipe	P.D. only	Wet	South	Unknown	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jul-01, Sat,16:30	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jul-02, Sun,10:15	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jul-07, Fri,09:40	Clear	Angle	P.D. only	Dry	West	Turning left	Truck and trailer	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Aug-04, Fri,17:08	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Aug-17, Thu,07:35	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-03, Sun,10:09	Rain	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-12, Tue,15:43	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Nov-02, Thu,09:50	Rain	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Nov-15, Wed,18:33	Clear	Sideswipe	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Passenger van	Other motor vehicle	
2017-Dec-09, Sat,16:56	Snow	Rear end	Non-fatal injury	Slush	West	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST/HWY 417 O'CONN IC119BR76 @ O'CONN

Traffic Control: Traffic signal **Total Collisions:** 75

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Dec-15, Fri,19:30	Snow	Sideswipe	P.D. only	Loose snow	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Dec-21, Thu,02:14	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Pick-up truck	Other motor vehicle	
2018-Jan-07, Sun,19:38	Snow	Turning movement	P.D. only	Loose snow	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jan-07, Sun,20:25	Clear	Rear end	Non-fatal injury	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-13, Tue,10:20	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Truck - tractor	Other motor vehicle	
2018-Apr-07, Sat,03:11	Strong wind	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Apr-10, Tue,05:51	Clear	Sideswipe	P.D. only	Dry	West	Turning left	Truck and trailer	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jun-29, Fri,12:28	Clear	Rear end	Non-fatal injury	Dry	West	Stopped	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Oct-11, Thu,16:12	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Oct-20, Sat,17:15	Clear	Sideswipe	P.D. only	Dry	West	Merging	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-13, Tue,14:48	Clear	Sideswipe	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Truck - dump	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: CATHERINE ST/HWY 417 O'CONN IC119BR76 @ O'CONN

Traffic Control: Traffic signal **Total Collisions:** 75

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-10, Thu,17:03	Clear	Rear end	Non-fatal injury	Wet	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	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-19, Tue,08:00	Clear	Rear end	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-13, Wed,18:34	Snow	Rear end	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Apr-25, Thu,10:20	Clear	Sideswipe	P.D. only	Dry	West	Turning left	Truck and trailer	Other motor vehicle	0
					West	Turning left	Truck and trailer	Other motor vehicle	
2019-May-14, Tue,17:18	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-27, Thu,10:06	Clear	Sideswipe	P.D. only	Wet	West	Unknown	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jul-01, Mon,07:00	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-23, Sat,15:19	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-02, Mon,10:50	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-16, Mon,06:58	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-25, Wed,18:30	Clear	Other	P.D. only	Dry	North	Reversing	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: MCLEOD ST E @ METCALFE ST E

Traffic Control: No control **Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jul-22, Fri,09:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Nov-30, Fri,06:55	Clear	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	

Location: MCLEOD ST W @ METCALFE ST

Traffic Control: Traffic signal **Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Feb-26, Thu,14:42	Clear	Sideswipe	P.D. only	Wet	West	Changing lanes	Bus (other)	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2015-Jun-19, Fri,18:44	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Turning right	Pick-up truck	Other motor vehicle	
2015-Oct-23, Fri,13:55	Clear	Sideswipe	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Passenger van	Other motor vehicle	
2017-Jun-18, Sun,16:43	Clear	Sideswipe	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle	0
					West	Turning right	Pick-up truck	Other motor vehicle	
2017-Aug-22, Tue,16:08	Clear	Sideswipe	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jan-10, Thu,17:50	Snow	Sideswipe	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Feb-13, Wed,17:45	Snow	Rear end	P.D. only	Slush	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-21, Thu,19:00	Snow	Sideswipe	P.D. only	Wet	West	Turning right	Unknown	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: MCLEOD ST W @ METCALFE ST

Traffic Control: Traffic signal **Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Apr-04, Thu,17:19	Clear	Turning movement	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jul-17, Wed,09:20	Clear	Sideswipe	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Aug-26, Mon,12:02	Clear	Sideswipe	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Truck - dump	Other motor vehicle	

APPENDIX F

Excerpts of Transportation Brief for 267 O'Connor Street

1. INTRODUCTION

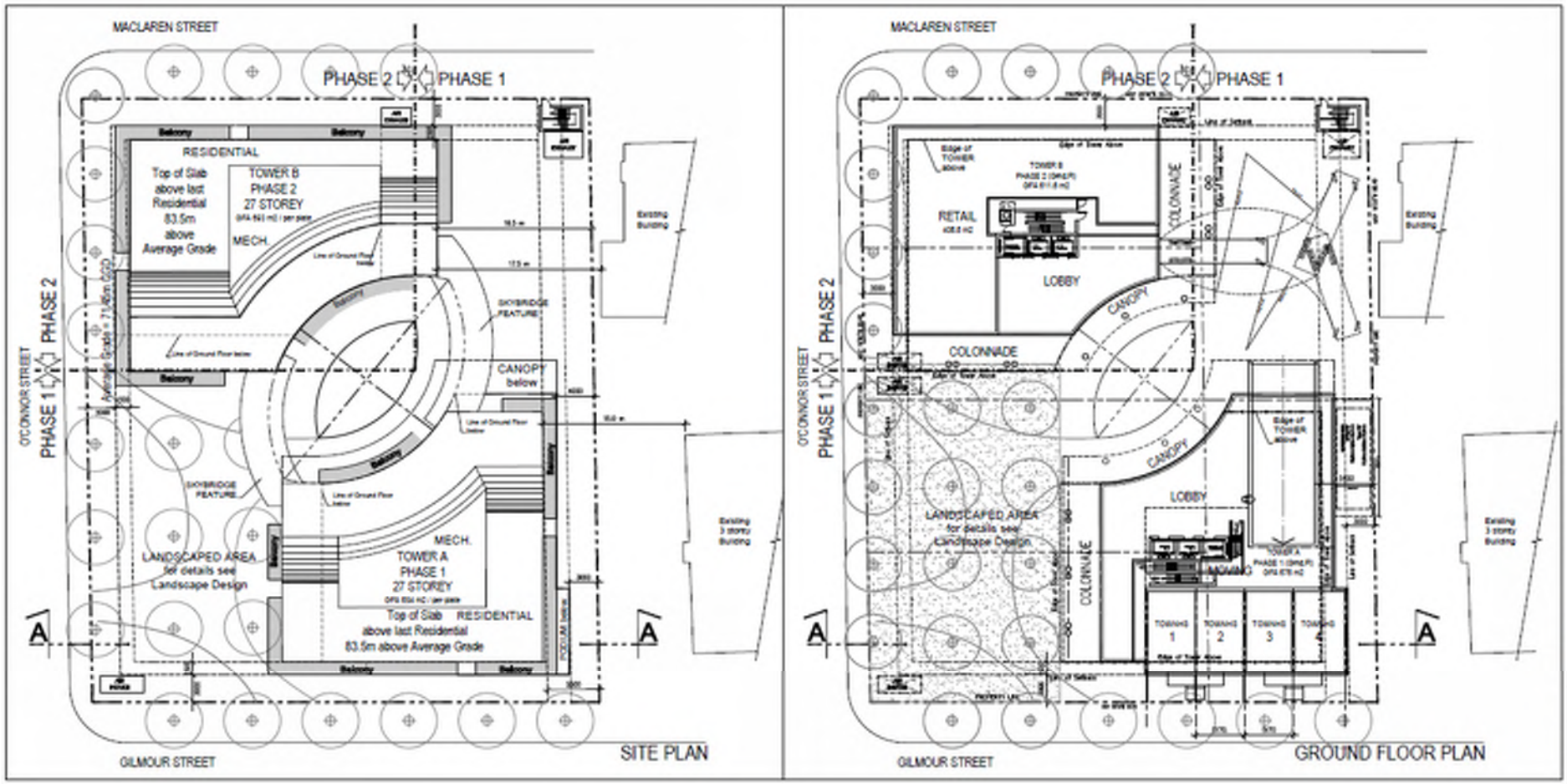
From the information provided, a residential development consisting of approximately 510 high-rise condominium units and approximately 4,300 ft^2 of ground floor retail is being proposed, which will be constructed in 2 phases. The proposed site is bound by O'Connor Street to the west, MacLaren Street to the north and Gilmour Street to the south, with access to/from MacLaren Street. The site, which is municipally known as 267 O'Connor, is currently occupied by a 6 storey office building and a pay & display parking lot. The local context of the site is provided as Figure 1 and the proposed Site Plan is provided as Figure 2.

Figure 1: Local Context

Based on the ensuing trip generation and our review of the City's Transportation Impact Assessment Guidelines (TIA), the proposed development is projected to generate a net increase of less than the City's threshold for requiring a Transportation Impact Assessment. As such, no further traffic analysis is required. However, this modified Transportation Brief has been prepared to assist in the application/review process and captures only the relevant transportation issues, which are as follows:

- Existing traffic conditions at adjacent intersections;
- Future site trip generation; and
- Site Plan issues, including pedestrian access, proposed vehicle access, parking, loading and circulation layout.

For the purpose of this assessment, projected conditions assumes full build-out of Phases 1 and 2.



267 O'Connor St.
Ottawa, Ontario

SITE PLAN
GROUND FLOOR

MASTERCRAFT STANWOOD

1 : 200

Mar 24, 14

35289

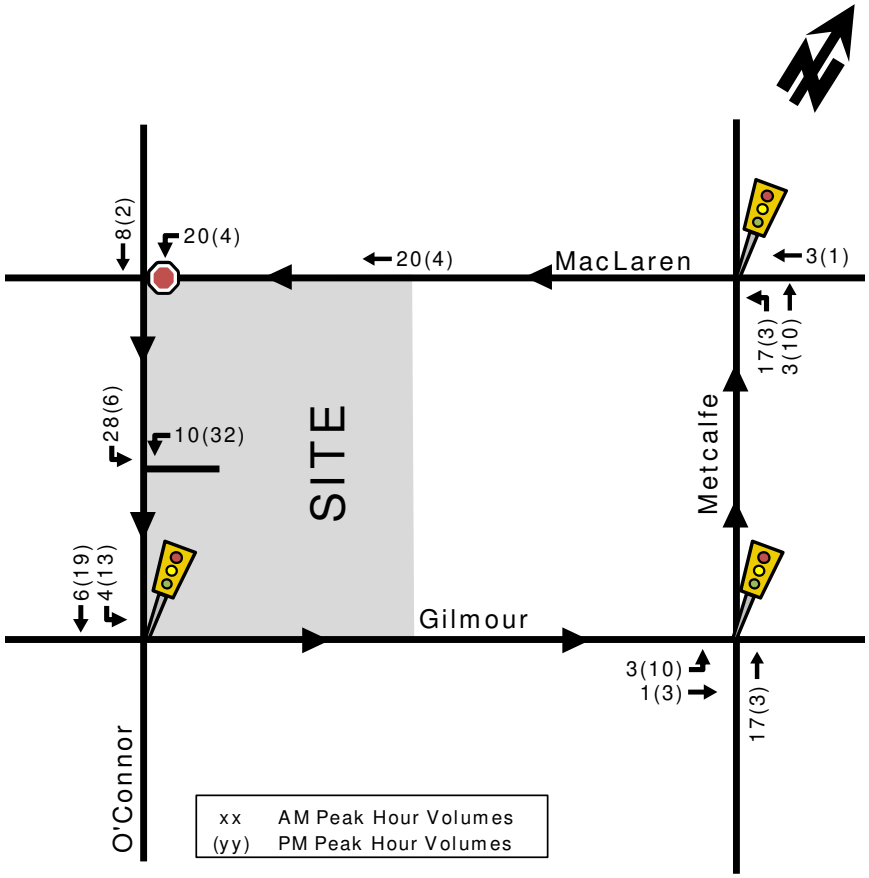
A-1.1

Figure 2: Proposed Site Plan

Given the proposed site is currently occupied by an approximate 50,000 ft^2 office building and a pay/display parking lot, which will be replaced by the proposed development, peak hour traffic counts were conducted at the existing site driveway connection to O'Connor Street to obtain existing peak hour site-generated trips. Assuming the same traffic distribution as the 'new' site-generated trips, the observed office/parking lot site-generated trips were removed from the study area network to obtain a 'net' increase in total projected peak hour traffic volumes. Existing office/parking lot site-generated traffic is illustrated as Figure 6 and it equates to 38 veh/h two-way total during both the morning and afternoon peak hours.

Removing the office/parking lot site-generated traffic, the projected 'net' increase in study area traffic is approximately 58 and 66 veh/h during the weekday morning and afternoon peak hours, respectively. This amount of 'new' traffic equates to approximately 1 new vehicle every minute.

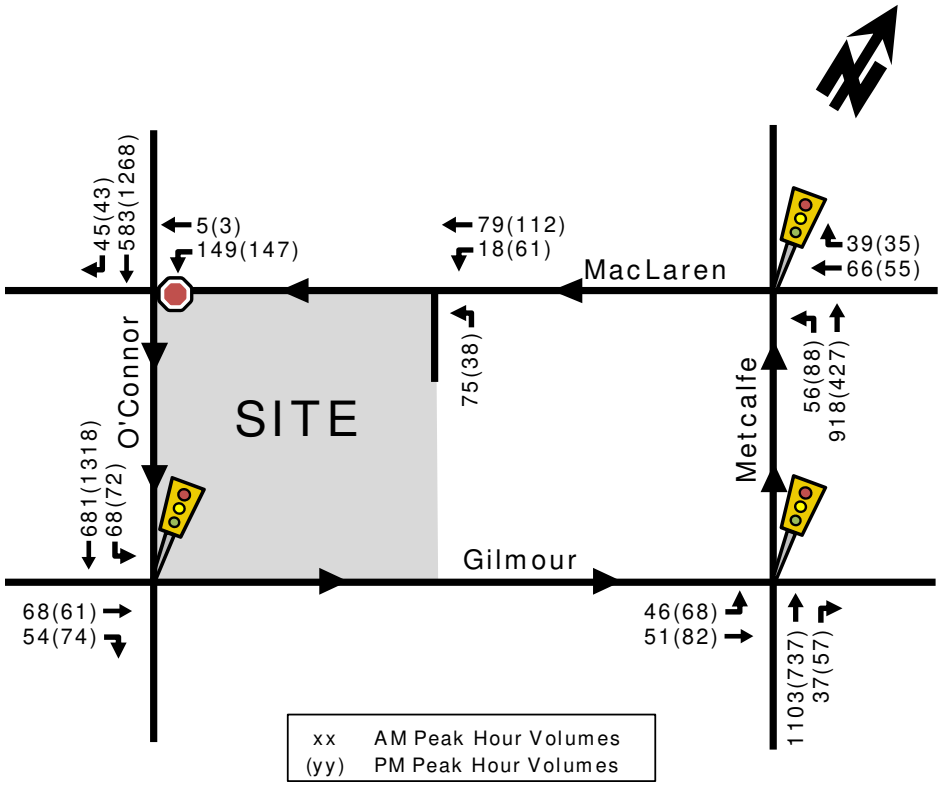
Figure 6: Existing Site-Generated Traffic Volumes



4. FUTURE TRAFFIC OPERATIONS

For the purpose of this study, the total projected traffic volumes were derived by superimposing site-generated traffic volumes (Figure 5) onto existing traffic volumes (Figure 3) and existing office/parking lot site-generated traffic volumes (Figure 6) were removed (i.e. Figure 5 + Figure 3 – Figure 6 = Total 'net' projected traffic volumes). The resulting total 'net' projected traffic volumes are illustrated as Figure 7.

Figure 7: Total Projected 'Net' Traffic Volumes



The following Table 7 provides a summary of projected performances of study area intersections at full site build-out. The SYNCHRO model output of projected conditions is provided within Appendix C.

Table 7: Projected Performance of Study Area Intersections

Intersection	Weekday AM Peak (PM Peak)					
	'Critical Movement'			'Intersection as a Whole'		
	LoS	max. v/c or avg. delay (s)	Movement	Delay (s)	LoS	v/c
Metcalfe/MacLaren	A(A)	0.35(0.20)	NBT(WBT)	3.3(3.0)	A(A)	0.34(0.19)
O'Connor/Gilmour	A(A)	0.34(0.38)	EBT(EBT)	7.3(7.2)	A(A)	0.26(0.37)
Metcalfe/Gilmour	A(A)	0.43(0.31)	NBT(NBT)	9.8(10.0)	A(A)	0.41(0.31)
O'Connor/MacLaren	B(B)	11.5(13.9)	WBL(WBL)	2.3(1.4)	-	-
MacLaren/Site	A(B)	9.6(10.4)	NBL(NBL)	5.0(4.1)	-	-

Note: Analysis of signalized intersections assumes a PHF of 0.95 and a saturation flow rate of 1800 veh/h/lane.

APPENDIX G

Transportation Demand Management

TDM-Supportive Development Design and Infrastructure Checklist:
Residential Developments (multi-family or condominium)

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-supportive design & infrastructure measures: *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; no rapid transit routes in area
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 Plan policy 4.3.12)*	☑

		TDM-supportive design & infrastructure measures: *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-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
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 *(see Zoning By-law Section 111)*	☑
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 *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☑
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	☐
	2.3	**Bicycle repair station**	
BETTER	2.3.1	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)	☐
	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	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	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	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses *(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	☐
	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	☑ - reduction required
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 *(see Zoning By-law Section 104)*	☐
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 *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	☐

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend

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

★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		1.	**TDM PROGRAM MANAGEMENT**	
		1.1	**Program coordinator**	
BASIC	★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
		1.2	**Travel surveys**	
BETTER		1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐
		2.	**WALKING AND CYCLING**	
		2.1	**Information on walking/cycling routes & destinations**	
BASIC		2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances *(multi-family, condominium)*	☑
		2.2	**Bicycle skills training**	
BETTER		2.2.1	Offer on-site cycling courses for residents, or subsidize off-site courses	☐

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances *(multi-family, condominium)*	☑
BETTER		3.1.2	Provide real-time arrival information display at entrances *(multi-family, condominium)*	☐
		3.2	**Transit fare incentives**	
BASIC	★	3.2.1	Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	☐
BETTER		3.2.2	Offer at least one year of free monthly transit passes on residence purchase/move-in	☐
		3.3	**Enhanced public transit service**	
BETTER	★	3.3.1	Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels *(subdivision)*	☐
		3.4	**Private transit service**	
BETTER		3.4.1	Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	☐
		4.	**CARSHARING & BIKESHARING**	
		4.1	**Bikeshare stations & memberships**	
BETTER		4.1.1	Contract with provider to install on-site bikeshare station (*multi-family)*	☐
BETTER		4.1.2	Provide residents with bikeshare memberships, either free or subsidized *(multi-family)*	☐
		4.2	**Carshare vehicles & memberships**	
BETTER		4.2.1	Contract with provider to install on-site carshare vehicles and promote their use by residents	☐
BETTER		4.2.2	Provide residents with carshare memberships, either free or subsidized	☐
		5.	**PARKING**	
		5.1	**Priced parking**	
BASIC	★	5.1.1	Unbundle parking cost from purchase price *(condominium)*	☑
BASIC	★	5.1.2	Unbundle parking cost from monthly rent *(multi-family)*	☑

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		6.	**TDM MARKETING & COMMUNICATIONS**	
		6.1	**Multimodal travel information**	
BASIC	★	6.1.1	Provide a multimodal travel option information package to new residents	☑
		6.2	**Personalized trip planning**	
BETTER	★	6.2.1	Offer personalized trip planning to new residents	☐