NOVATECH

Engineers, Planners & Landscape Architects

Engineering

- Land/Site Development
- Municipal Infrastructure
- Environmental/ Water Resources
- Traffic/ Transportation
- Recreational

Planning

- Land/Site Development
- Planning Application Management
- Municipal Planning
- Urban Design
- Expert Witness (LPAT)
- Wireless Industry

Landscape Architecture

- Streetscapes & Public Amenities
- Open Space, Parks & Recreation
- Community & Residential
- Commercial & Institutional
- Environmental Restoration

25 PICKERING PLACE – PHASE ONE

Transportation Impact Assessment

Proposed Mixed-Use Development

25 Pickering Place – Phase One

Transportation Impact Assessment

Prepared By:

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

Dated: May 2024

Novatech File: 119240
Ref: R-2024-015

NOVATECH
Engineers, Planners & Landscape Architects

May 10, 2024

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

Attention: **Mr. Mike Giampa, P.Eng**
Senior Transportation Engineer, Infrastructure Applications

Dear Mr. Giampa:

Reference: **25 Pickering Place – Phase One**
Transportation Impact Assessment
Novatech File No. 119240

We are pleased to submit the following Transportation Impact Assessment (TIA), in support of a Site Plan application at Phase 1 of 25 Pickering Place, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa Revised Transportation Impact Assessment Guidelines (June 2023).

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

Yours truly,

NOVATECH

Trevor Van Wiechen, M.Eng.
E.I.T. | Transportation

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.**

City Of Ottawa
Infrastructure Services and Community Sustainability
Planning and Growth Management
110 Laurier Avenue West, 4th fl.
Ottawa, ON K1P 1J1
Tel. : 613-580-2424
Fax: 613-560-6006

Ville d'Ottawa
Services d 'infrastructure et Viabilité des collectivités
Urbanisme et Gestion de la croissance
110, avenue Laurier Ouest
Ottawa (Ontario) K1P 1J1
Tél. : 613-580-2424
Télécopieur: 613-560-6006

Dated at Ottawa (City) this 10 day of May, 2024 .

Name: Jennifer Luong
(Please Print)

Professional Title: P. Eng. - Senior Project Manager

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

Office Contact Information (Please Print)	
Address:	240 Michael Cowpland Drive
City / Postal Code:	Ottawa, ON K2M 1P6
Telephone / Extension:	613-254-9643 ext. 254
E-Mail Address:	j.luong@novaetch-eng.com

TABLE OF CONTENTS

Figures

Tables

Appendices

EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of a Site Plan application for the mixed-use development at Phase One of 25 Pickering Place. The subject site was previously occupied by warehouse and office uses.

The subject site is located in the east side of the Pickering Place at its southern end and is surrounded by the following:

- Warehouse and Office buildings followed by Tremblay Road and the Queensway to the north,
- Warehouse developments and auto centre followed by Belfast Road to the east,
- Rail corridor followed by commercial and industrial developments to the south, and
- Via Rail and OC Transpo Tremblay rail stations to the west.

The proposed development includes approximately 483 residential units and 279m^2 of ground floor commercial. Underground parking, with roughly 250 parking spaces for both buildings, will be provided and accessed through the proposed access to Pickering Place. The proposed development is anticipated to be completed in one phase, with buildout occurring in 2027. The proposed development is the first phase of a larger overall development between Pickering Place and Avenue L south of Tremblay Road. A previous Draft Plan and Zoning Application was completed for the overall development.

The Subject Property is designated as a Hub with an Evolving Neighbourhood overlay within the Inner Urban Transect of the City of Ottawa Official Plan (2021). The property is zoned Transit Oriented Development Zone (TD3) in the City of Ottawa Zoning By-law 2008-250.

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

Forecasting

- As the current site plan proposes 96 fewer dwelling units and a decrease in ground floor commercial the trip generation and traffic analysis presented in the 2020 TIA is a conservative analysis.

Development Design

- Sidewalks will be provided between the proposed development and adjacent roadways and will connect to the main building entrances.
- Bicycle parking will be provided within the underground parking garage.
- OC Transpo stops #1369, #1371, #1836, #1837, and #3024 are within 400m walking distance of all entrances to the proposed development.
- All required TDM-supportive design and infrastructure measures in the TDM checklist are met.
- Sufficient intersection sight distance is available at each access for all turning movements.

Parking

- The proposed development includes 46 visitor parking spaces. As the development provides 46 visitor parking spaces the minimum vehicle parking requirement is met.

- A total of 373 bicycle parking spaces are proposed, which meets the 243 bicycle parking spaces as required by the Zoning By-law.

- The proposed development includes 250 parking spaces for tenants and visitors of the building. Per the Zoning By-law a maximum of 846 parking spaces is allowed for this development. As 250 parking spaces are provided the development does not exceed the maximum number of allowable parking spaces.

Boundary Streets

- A sidewalk on the east side of Pickering Place south of Bannermount Avenue is proposed as part of this site plan. A sidewalk can be considered on the east side of Pickering Place as part of the future site plan application for Block D of the 25 Pickering Place subdivision north of Bannermount Avenue.

- Pickering Place does not meet the target Bicycle Level of Service (BLOS) D. On Pickering Place a BLOS B can be achieved by either reducing the posted speed to 40km/h or painting 1.2m wide bike lanes. A reduced posted speed limit is considered appropriate for the 7m road width planned as part of the 25 Pickering subdivision. North of the subdivision the 10.5m road width is sufficient for two 1.25m bike lanes and two 4m travel lanes. This is identified for the City's consideration.

Access Design

- As the Pickering Place access meets Pickering Place at a perpendicular angle and no sightline obstructions have been identified based on a desktop review, available sightlines are within recommended guidelines to allow safe all directional access to the development.

- The proposed accesses adhere to all provisions of the City's Private Approach By-law.

1.0 SCREENING

1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared in support of a Site Plan application for the mixed-use development at Phase One of 25 Pickering Place. The subject site was previously occupied by warehouse and office uses.

The subject site is located in the east side of the Pickering Place at its southern end and is surrounded by the following:

- Warehouse and Office buildings followed by Tremblay Road and the Queensway to the north,
- Warehouse developments and auto centre followed by Belfast Road to the east,
- Rail corridor followed by commercial and industrial developments to the south, and
- Via Rail and OC Transpo Tremblay rail stations to the west.

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

Figure 1: View of the Subject Site

1.2 Proposed Development

The proposed development includes approximately 483 residential units and 279m^2 of ground floor commercial. Underground parking, with roughly 250 parking spaces for both buildings, will be

provided and accessed through the proposed access to Pickering Place. The proposed development is anticipated to be completed in one phase, with buildout occurring in 2027. The proposed development is the first phase of a larger overall development between Pickering Place and Avenue L south of Tremblay Road. A previous Draft Plan and Zoning Application was completed for the overall development.

The Subject Property is designated as a Hub with an Evolving Neighbourhood overlay within the Inner Urban Transect of the City of Ottawa Official Plan (2021). The property is zoned Transit Oriented Development Zone (TD3) in the City of Ottawa Zoning By-law 2008-250.

A copy of the site plan and overall master plan are included in **Appendix A**.

1.3 Screening Form

The City's *2023 TIA Guidelines* identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form, which is included in **Appendix B**. The trigger results are as follows:

- Trip Generation Trigger – The development is expected to generate a net additional 60 peak hour person trips; further assessment is **required** based on this trigger.
- Location Triggers – The development is located within a hub, a Protected Transit Station Area, and a design priority area; further assessment is **required** based on this trigger.
- Safety Triggers – The development does not meet any safety triggers identified within the TIA Screening Form; further assessment is **not required** based on this trigger.

While the Trip Generation Trigger is met, new intersection analysis is not required as it was prepared for the parent 2020 TIA related to Draft Plan and Zoning applications for the whole site. A limited scope TIA is required for the Phase One site plan application based on the Location and Safety triggers.

2.0 SCOPING

2.1 Existing Conditions

2.1.1 Roadways

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

Tremblay Road is a major collector roadway that runs in an east-west direction between Riverside Drive and Triole Street. Tremblay Road is classified as a truck route allowing full loads. West of Pickering Place Tremblay Road has a four-lane divided urban cross-section, and east of Pickering Place it transitions a two-lane undivided cross-section. Within the vicinity of the subject site Tremblay Road has a posted speed limit of 50km/h.

Belfast Road runs in a north-south direction between Coventry Road and Michael Street, Belfast Road is a collector roadway south of Tremblay Road and a major collector roadway north of Tremblay Road. Belfast Road is classified as a truck route allowing full loads. Within the study area, it has a two-lane undivided urban cross-section with a posted speed limit of 50 km/h.

Pickering Place is a local roadway that runs in a north-south direction between Tremblay Road and the Via Rail Station parking lot. It has a two-lane undivided urban cross-section with an unposted regulatory speed limit of 50km/h.
Avenue J (Private) is a local roadway that runs in a north-south direction between Tremblay Road and Pickering Place. It has a two-lane undivided urban cross-section with an unposted regulatory speed limit of 50km/h.

Avenue K is a local roadway that runs in a north-south direction between Tremblay Road and a dead end to the south. It has a two-lane undivided urban cross-section with an unposted regulatory speed limit of 50km/h.

Avenue L is a local roadway that runs in a north-south direction between Tremblay Road and a dead end to the south. It has a two-lane undivided urban cross-section with an unposted regulatory speed limit of 50km/h.

2.1.2 Intersections

Tremblay Road/Via Rail Access

- Four-legged signalized intersection
- Northbound Approach (Via Rail Access): one left turn lane and one right turn lane
- Southbound Approach (OC Transpo Maintenance Access): one shared all-movement lane
- Westbound Approach (*Tremblay Road*): two through lanes and one left turn lane
- Eastbound Approach (*Tremblay Road*): two through lanes one right turn lane, and one left turn lane
- Standard pedestrian crossings on all approaches
- Westbound right turn and eastbound left turn lanes are provided for authorized vehicles only

Tremblay Road/Pickering Place

- Three-legged stop control intersection
- Northbound Approach (Pickering Place): one shared all-movement lane
- Westbound Approach (Tremblay Road): one left turn lane and two through lanes
- Eastbound Approach (Tremblay Road): one through lane and one right turn lane
- Standard pedestrian crossing on the northbound approach

Tremblay Road/Avenue J

- Three-legged stop control intersection
- Northbound Approach (Avenue J): one shared left/right turn lane
- Westbound Approach (Tremblay Road): one shared through/left turn lane
- Eastbound Approach (Tremblay Road): one shared through/right turn lane
- Depressed curb on the northbound approach

Tremblay Road/Avenue K

- Three-legged stop control intersection
- Northbound Approach (Avenue K): one shared left/right turn lane
- Westbound Approach (Tremblay Road): one shared through/left turn lane
- Eastbound Approach (Tremblay Road): one shared through/right turn lane
- Standard pedestrian crossing on the northbound approach

Tremblay Road/Avenue L

- Three-legged stop control intersection
- Northbound Approach (Avenue L): one shared left/right turn lane, left turn prohibited in peak hours
- Westbound Approach (Tremblay Road): one shared through/left turn lane
- Eastbound Approach (Tremblay Road): one through lane and one shared through/right turn lane
- Standard pedestrian crossing on the northbound approach

Belfast Road/Tremblay Road

- Four-legged signalized intersection
- Northbound/Southbound Approaches (Belfast Road): one left turn lane and one shared through/right turn lane
- Westbound/Eastbound Approaches (Tremblay Road): one left turn lane and one shared through/right turn lane
- Standard pedestrian crossings on all approaches

2.1.3 Driveways

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

Pickering Place, East Side:

- Four driveways to various parking lots at 250 Tremblay Road and 1330 Avenue K

Pickering Place, Southern End

- One access to Via Rail parking lot

Pickering Place, West Side:

- None

2.1.4 Pedestrian and Cycling Facilities

Pedestrian facilities are provided at the following locations within the study area:

- A multi-use path is provided on the north side of Tremblay Road east of Via Rail;
- Sidewalks are provided on both sides of Belfast Road north of Tremblay Road;
- A multi-use path is provided on the west side of Belfast Road;
- Sidewalks are provided on both sides of the Via Rail access;
- A sidewalk is provided on the west side of Pickering Place; and
- A walking bridge begins within the Via Rail access and crosses over Tremblay Road and Highway 417 to the north.

2.1.5 Transit

The closest OC Transpo bus stops in the vicinity of the subject site are described in **Table 1** and all bus stops within the vicinity of the study area are shown in **Figure 2**. A summary of various routes which serve the study area is included in **Table 2**. Detailed route information and the network map are included in **Appendix C**.

Table 1: OC Transpo Transit Stops

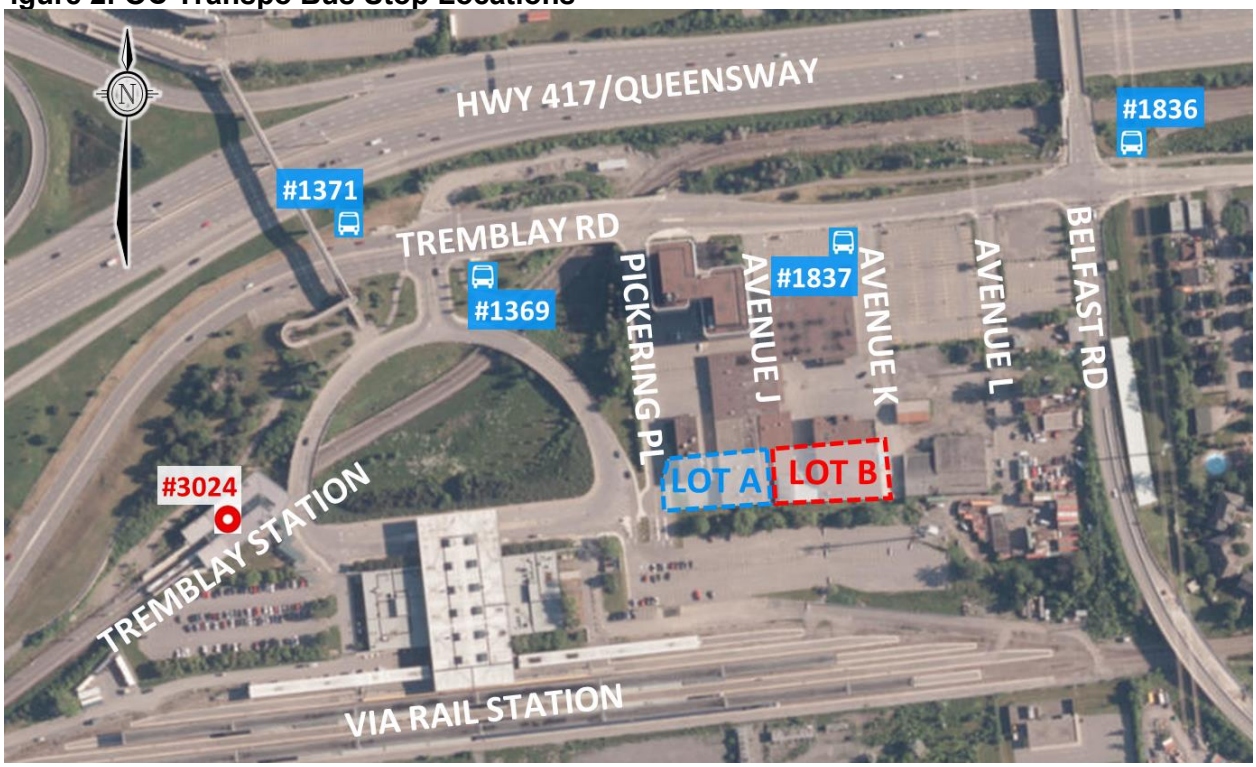
Stop	Location	Routes Serviced
#1369	South Side of Tremblay Rd east of Via Rail Access	39
#1371	North Side of Tremblay Rd west of Via Rail Access	39
#1836	Northeast corner of Tremblay Rd/Belfast Rd	18, 39
#1837	South side of Tremblay Rd west of Avenue K	39

Stop	Location	Routes Serviced
#3024	Southeast of Tremblay Rd and northwest of the Via Rail Station	Confederation Line

Table 2: OC Transpo Route Information

Route	From ↔ To	Frequency
18	St. Laurent ↔ Parliament	30-minute headways, all-day service, 7-days per week
39	Blair ↔ N Rideau	30-minute headways, overnight service only within the study area, 7-days per week.
Confederation	Tunney's Pasture ↔ Blair	5-minute headways, all-day service, 7-days per week

Figure 2: OC Transpo Bus Stop Locations



2.1.6 Area Traffic Management

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

2.1.7 Existing Traffic Volumes

Weekday traffic counts were taken from the parent September 2020 TIA completed by CIMA+ for previous zoning and Draft Plan applications for the whole site. As stated in the 2020 TIA there were no recent traffic counts completed at the Tremblay Road/Pickering Place, Tremblay Road/Avenue K, and Tremblay Road/Avenue L intersections at their time of writing. As the study was completed during the COVID-19 pandemic and new traffic counts would have been unreliable, traffic volumes

used in the study were calculated by estimating trip generation for existing developments within the study area.

A January 8, 2020 traffic count at Tremblay Road/Belfast Road and a January 30, 2019 traffic count at Tremblay Road/VIA Vail Access were used for intersection analysis within the 2020 TIA and to estimate through traffic along Tremblay Road at the Tremblay Road/Pickering Place, Tremblay Road/Avenue K, and Tremblay Road/Avenue L intersections.

As this report provides no new traffic analysis and builds upon the analysis presented in the September 2020 TIA the volumes used in the September 2020 TIA were used in this TIA. A January 27, 2015 count at the Pickering Place/Tremblay Road intersection was obtained from the City of Ottawa to compare to the assumed traffic volumes. A comparison of the 2015 traffic count and the generated 2020 traffic volumes showed that the volumes used in the 2020 analysis were conservative.

Traffic volume excerpts from the 2020 TIA and the 2015, 2019, and 2020 traffic counts are included in **Appendix D**. Traffic volumes within the study area are shown in **Figure 3**.

2.1.8 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 and road segments between 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, defined in the *2023 TIA Guidelines* as 'more than six collisions in five years' for any one movement. The number of collisions at each intersection from January 1, 2017 to December 31, 2021 is summarized in **Table 3**.

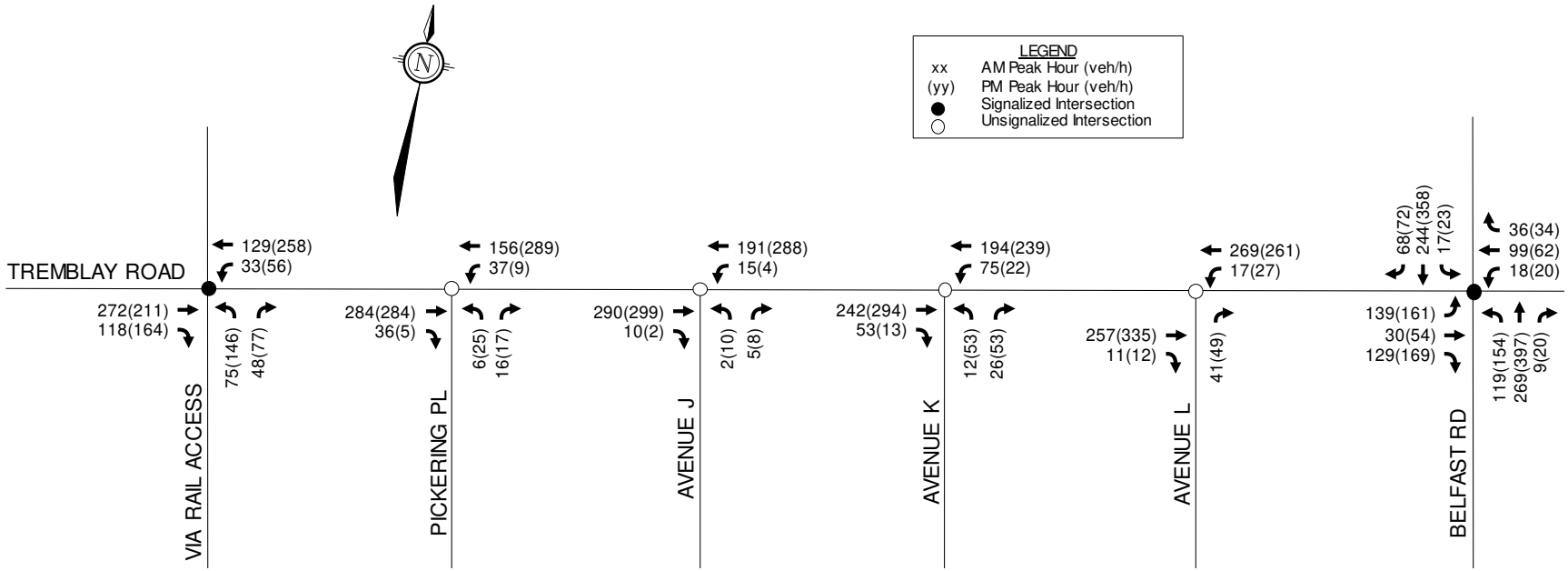
Table 3: Reported Collisions

Location	Impact Types						Total
	Approach	Angle	Rear End	Sideswipe	Turning Mvmt	SMV[1]/ Other	
Pickering Place/Tremblay Road	-	-	-	1	-	-	**1**
Pickering Place south of Tremblay Road	-	-	-	-	-	-	**0**

1. SMV = Single Motor Vehicle

As there are less than six collisions of any given type there is no discernible collision pattern within the study area.

Figure 3: Existing Traffic Volumes



2.2 Planned Conditions

2.2.1 Planned Roadway and Transit Projects

The City of Ottawa's 2013 Transportation Master Plan proposes widening of Tremblay Road from two to four lanes between Pickering Place and St. Laurent Boulevard within the 2031 Affordable Road Network (Phase 3: 2026-2031). The City of Ottawa's 2013 Transportation Master Plan also proposes widening of Belfast Road from two to four lanes between Tremblay Road and Coventry Road with the 2031 Network Concept.

The subject site is located within the Tremblay Transit Oriented Development (TOD) area. The Tremblay TOD Plan from the City's 2014 Transit-Oriented Development (TOD) Plans recommends improved pedestrian facilities within the study area including both sides of Tremblay Road west of the Via Rail access, the east side of Pickering Place, both sides of Avenue K and L and both sides of a future east-west road connections connecting the southern ends of Pickering Place and Avenues J, K, and L. A pedestrian tunnel connecting Via Rail Station to Terminal Road is also planned. Improved cycling facilities include dedicated cycling facilities on Tremblay Road and Belfast Road. The proposed pedestrian and bicycle network from the Tremblay TOD Plan are included in **Appendix F**.

2.2.2 Other Area Developments

In proximity of the proposed development, there are multiple developments that are approved, or in the approval process. Other developments in the area include:

- 400 Coventry Road – A TIA was prepared by CGH in 2023 in support of a mixed-use apartment development. The development includes 1,768 dwelling units and 1,500m^2 of commercial space. The development is anticipated to be complete by 2032. The TIA estimated that the development would generate 111 and 137 vehicle trips during the AM and PM peak hours, respectively.
- 300 Tremblay Road – A TIA was prepared by Parsons in 2021 in support of a mixed-use apartment development. The development includes 73 dwelling units and 150m^2 of retail space. The development was anticipated to be complete by 2022. The TIA estimated that the development would generate 8 and 7 vehicle trips during the AM and PM peak hours, respectively.
- 530 Tremblay Road (Residential) – A TIA was prepared by CGH in 2019 in support of a residential apartment development. A future mixed-use development to the east by Canada Lands Company was also considered. The proposed development includes 122 dwelling units. The apartment development was anticipated to be complete by 2021 in a single phase. The TIA estimated that the apartment development would generate 16 and 17 vehicle trips during the AM and PM peak hours, respectively.
- 530 Tremblay Road (Mixed-Use) – A TIA was prepared by WSP in 2021 in support of the future Canada Lands Company mixed-use development. The proposed development includes a 150,000 m^2 office space and 500 dwelling units. The development is anticipated to be complete by 2033 in three phases. The TIA estimated that the development would generate 350 and 360 vehicle trips during the AM and PM peak hours, respectively.

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

2.3 Study Area and Time Periods

The study area for this report includes the boundary roadway Pickering Place and the new road Bannermount Avenue, to be constructed as part of the parent Draft Plan application.

The weekday AM and PM peak hours have been considered, as this represents the worst-case combination of site generated traffic and adjacent street traffic.

2.4 Development Generated Traffic

The previous TIA completed by CIMA+ in 2020 included trips generated for the two towers proposed within the current site plan application. The 2020 analysis assumed a total of 579 units within the two proposed towers with 6,750ft^2 of ground floor commercial. The current site plan shows 483 units within the two proposed towers with 3,002ft^2 of ground floor commercial. As the current site plan proposes 96 fewer dwelling units and a negligible decrease in ground floor commercial the trip generation and traffic analysis presented in the 2020 TIA is a conservative analysis.

2.5 Access Location

The proposed access to the subject site has been evaluated based on the relevant requirements of the City's *Private Approach By-Law* (PABL), Zoning By-law (ZBL) and the Transportation Association of Canada (TAC).

Section 25(a) of the PABL identifies that a property with 20-34m of frontage may have a maximum of one two-way private approaches. This requirement is met, as the subject site has approximately 30m of frontage to Pickering Place and is proposing one two-way access to Pickering Place.

Section 25(c) of the PABL identifies a maximum width requirement of 9.0m for any two-way private approach, as measured at the street line. Since the proposed access is approximately 7.5m in width when measured at the property line, this requirement is met.

Section 25(p) of the PABL identifies a minimum separation requirement of 3.0m between the nearest edge of a private approach and the closest property line, as measured at the street line. Since the nearest edge of the access is proposed to be approximately 3.0m from the southern property line, this requirement is met.

Section 25(u) of the PABL identifies a maximum driveway grade of 2-6% for a distance of 9m within the property, for driveways serving more than 50 parking spaces, this requirement is met.

Intersection sight distance (ISD) at the proposed accesses have been determined using the TAC *Geometric Design Guidelines for Canadian Roads.* The ISD requirements for the Pickering Place access, based on a design speed of 60km/h, is as follows:

- Left Turn from Minor Road 130 metres
- Right Turn from Minor Road 110 metres

As the Pickering Place access meets Pickering Place at a perpendicular angle and no sightline obstructions have been identified based on a desktop review, available sightlines are within recommended guidelines to allow safe all directional access to the development.

The ISD requirements for the Bannermount Avenue access, based on a design speed of 50km/h, is as follows:

- Left Turn from Minor Road 105 metres
- Right Turn from Minor Road 95 metres

As shown on the proposed site plan shown in **Appendix A** the Bannermount Avenue access to the proposed loading is located on a curved section of Bannermount Avenue, based on a desktop review, vehicles exiting the access will have unobstructed sightlines to see vehicles approaching from the west and the north.

The TAC Geometric Design Guide for Canadian Roads identifies minimum clear throat lengths based on road classification and land use. Although no requirements are stated for local roads a minimum clear throat length of 8m is recommended.

The TAC Geometric Design Guide for Canadian Roads identifies a minimum corner clearance distance of 15m for an access on a local road. The access is roughly 150m away from the Tremblay Road/Pickering Place access.

2.6 Exemptions Review

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

Table 4: TIA Exemptions

Module	Element	Exemption Criteria	Exemption Status
4.1 Development Design	*4.1.2* Circulation and Access	• Only required for Site Plan and Zoning By-law Applications	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 Plan and Zoning By-law Applications	Not Exempt
4.5 TDM	*All elements*	• Required for any development that generates greater than 60 peak hour person trips	Not Exempt
4.6 Neighbourhood Traffic Management	*4.6.1* Adjacent Neighbourhoods	• If the development meets all of the following criteria along the route(s) site generated traffic is expected to utilize between arterial road and the site's access: 1. Access to a Collector or Local; 2. "Significant sensitive land use presence" exists where there is at least two of the following adjacent to the subject street segment (School, Park, Retirement/Older Adult Facility, Licenced Child Care Centre, Community Centre, or 50% or greater of the property is occupied by residential land uses) 3. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision 4. At least 75 site generated auto trips	Exempt

Module	Element	Exemption Criteria	Exemption Status
		5. Site Trip Infiltration expected	
4.7 Transit	*4.7.1 Transit Route Capacity*	• Greater than 75 site transit trips	Exempt
	4.7.2 Transit Priority Requirements	• Greater than 75 site auto trips	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
4.9 Intersection Design	*4.9.1 Intersection Controls*	• Greater than 75 site auto trips	Exempt
	4.9.2 Intersection Design	• Greater than 75 site auto trips	Exempt

While the Trip Generation Trigger is met, new intersection analysis is not required as it was prepared for the parent 2020 TIA related to Draft Plan and Zoning applications for the whole site. Therefore, all Network Impact modules (Modules 4.6 through 4.9) are exempt from further analysis. 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 4.5: Transportation Demand Management

3.0 FORECASTING

3.1 Trip Distribution

New intersection analysis has not been prepared as it was previously prepared for the parent 2020 TIA related to Draft Plan and Zoning applications for the whole site.

3.2 Background Traffic

3.2.1 Other Area Developments

A review of other area development traffic has been conducted, per the developments listed in Section 2.2.2. Traffic generated by these developments have been considered in other studies. Relevant excerpts of the traffic studies associated with the developments below are included in **Appendix G**.

<u>400 Coventry Road</u>
The proposed residential and retail development is expected to generate 111 and 137 vehicle trips during the AM and PM peak hours, respectively. Half of the site traffic for the proposed development has been included in 2027 background traffic and the 2032 background traffic includes the full buildout of the development.

300 Tremblay Road
The proposed residential and retail development is expected to generate 7-8 vehicle trips during the AM and PM peak hours. The 2021 TIA completed for this site considered site traffic negligible for the proposed development and it has not been included within the background traffic for this report.

530 Tremblay Road
The proposed residential development is expected to be completed in 2027 and generate 16 and 17 vehicle trips during the AM and PM peak hours, respectively.

The future adjacent development is expected to be completed in 2033 and generate 350 and 360 vehicle trips during the AM and PM peak hours, respectively. The development is expected to built out in phases and the 150,000 m^2 office space and 200 dwelling units are expected to be completed by 2027.

Site traffic for the residential development and the 150,000 m^2 office space and 200 dwelling units of the mixed-use development has been included in 2027. The full build out of the mixed-use development has been included in 2032 background traffic. The site traffic was accounted for in the previous 2020 TIA.

3.2.2 General Background Growth Rate

A background growth rate of 0% was selected to be consistent with the previous 2020 TIA completed for the subject site.

3.3 Future Traffic Conditions

The background traffic volumes in 2027 and 2032 are shown in **Figures 4** and **5**.

Figure 4: 2027 Background Traffic

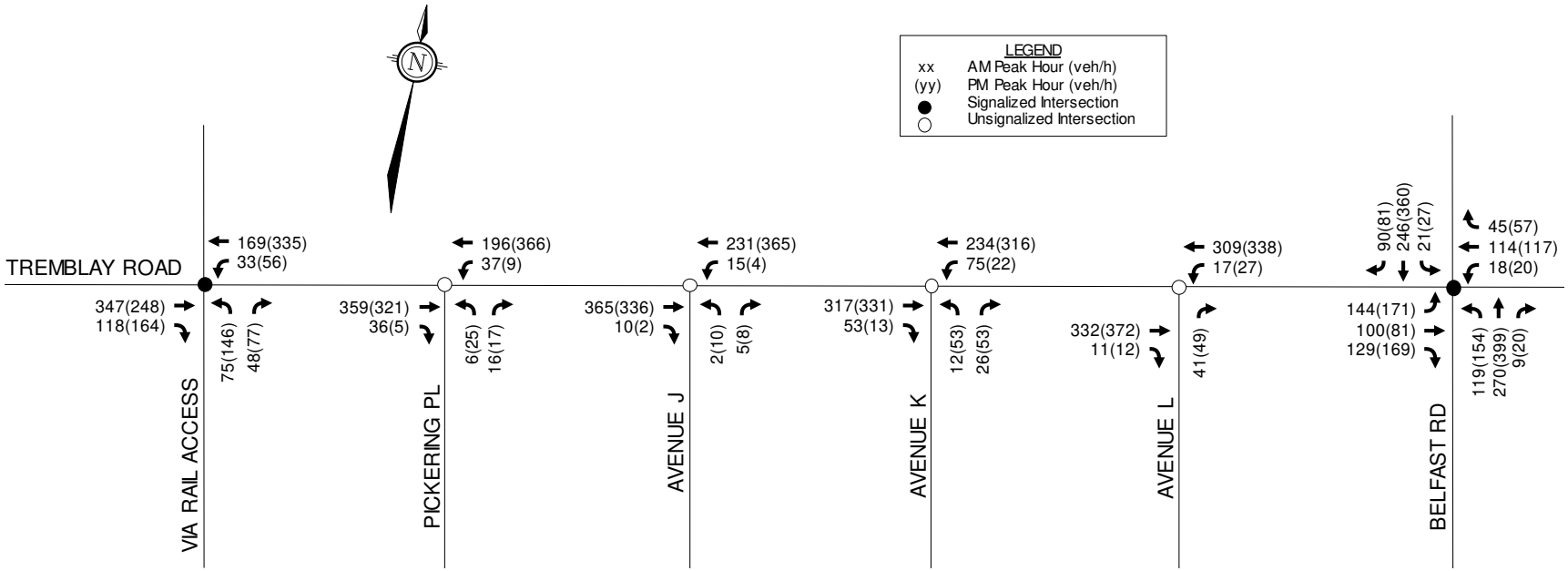
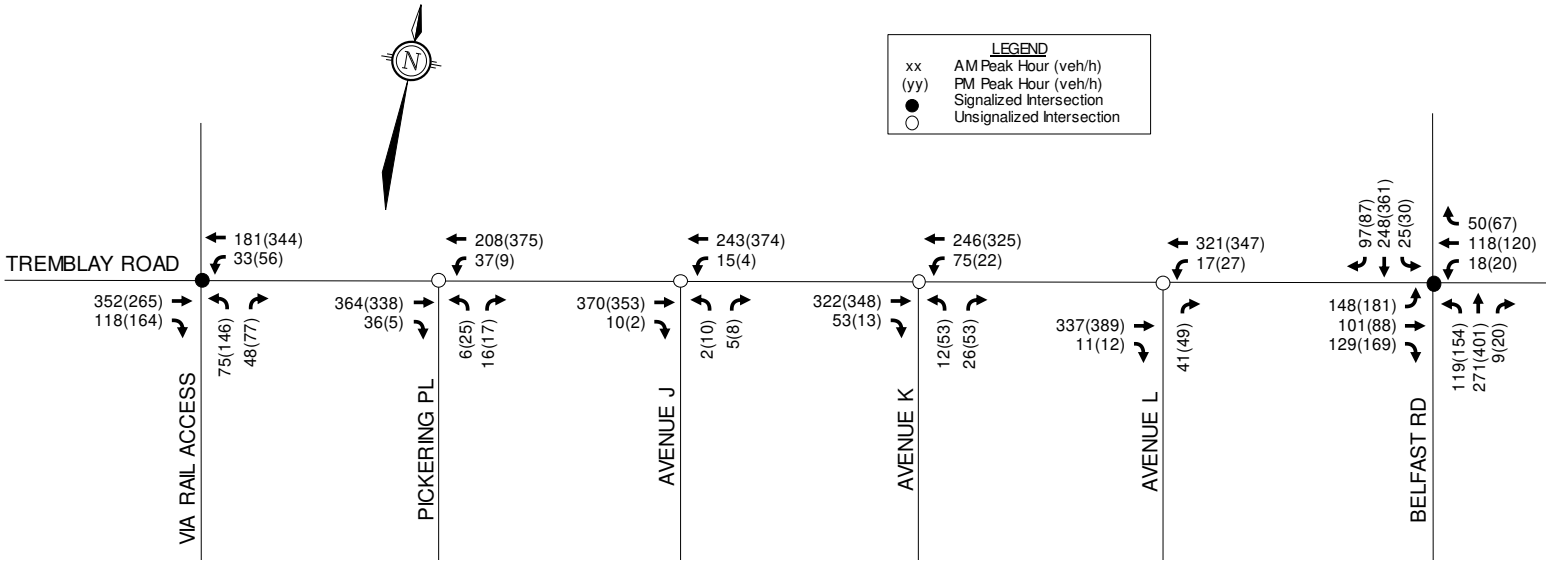


Figure 5: 2032 Background Traffic



3.4 Demand Rationalization

New intersection analysis has not been prepared as it was previously prepared for the parent 2020 TIA related to Draft Plan and Zoning applications for the whole site.

4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

Sidewalks will be provided between the proposed development and adjacent roadways and will connect to the main building entrances.

Bicycle parking will be provided within the underground parking garage.

All bus stops discussed in Section 2.1.5 (and shown in **Figure 2**) are within 400m walking distance of the entrances to the proposed development. These stops are served by Routes 18, 39, and the Confederation Line. A 400m walking distance is equivalent to a five-minute walk, per OC Transpo's service design guidelines.

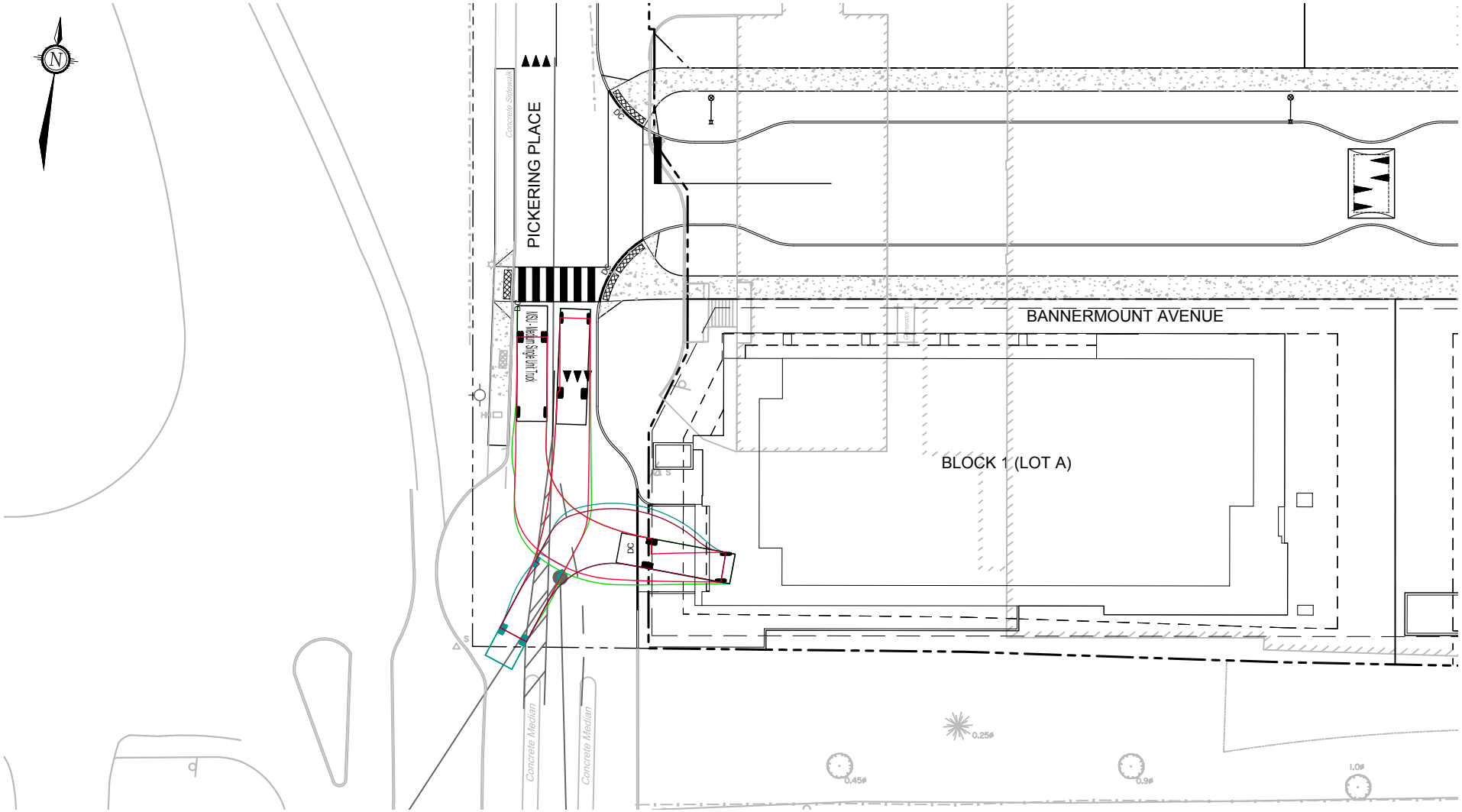
A review of the City's *Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist* has been conducted. All required TDM-supportive design and infrastructure measures in the TDM checklist are met. A copy of this checklist is included in **Appendix H**.

In order to encourage the use of sustainable modes, the following 'basic' and 'better' design measures from the City's TDM Infrastructure Checklist will be implemented for the proposed redevelopment:

- The building will be located near the street and have no parking areas between the street and building entrances;
- The location of the building entrances will minimize the walking distance to sidewalks and transit stops/stations;
- Building doors and windows will ensure visibility of pedestrians from the building; and
- Walking routes from the development to nearby transit stops will be safe, direct, and attractive.

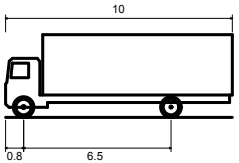
4.1.2 Circulation and Access

Garbage collection will occur on the ground floor near the lobby of each of the buildings, the garbage will then be brought to the curb for further collection. As shown in **Figure 6**, an MSU representing a garbage truck can turn at the Pickering Place access and collect garbage from the east curbline along Pickering Place. Loading areas for moving trucks are provided for each of the proposed buildings. The loading area for Building 1 is provided off of Pickering Place to the south of the garage access and the loading area for Building 2 is provided off of Bannermount Avenue to the east of the building. Turning movements of the design truck reversing into the loading areas are provided in **Figures 7** and **8**. An LSU moving truck is accommodated at Building 1 and an MSU moving truck is accommodated at Building 2. The fire route will be provided along the boundary roads on Pickering Place and Bannermount Avenue.



NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6

Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com



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

25 PICKERING AVENUE LOT A

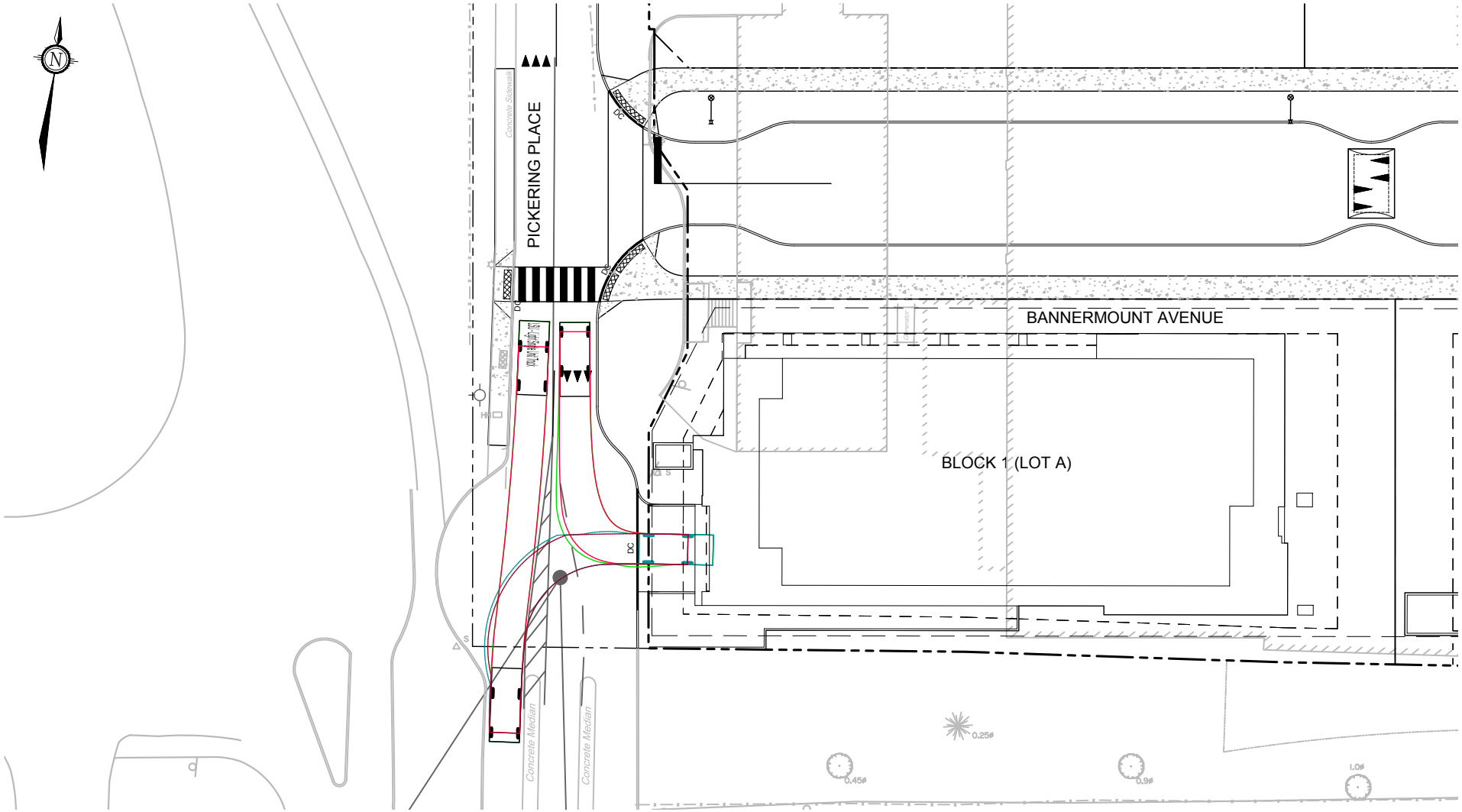
TURNING MOVEMENTS (MSU)

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

DATE APR 2024 | JOB 119240 | FIGURE FIGURE 6

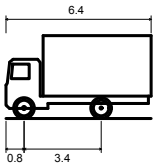
C:\temp\AcPublish_19000\119240-TM.dwg, Fig6, May 07, 2024 - 12:02pm, rhillier

SHT8X11.DWG - 216mmx279mm



NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6

Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com



LSU - Light Single Unit Truck

Overall Length	6.400m
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	6.300m

25 PICKERING AVENUE LOT A

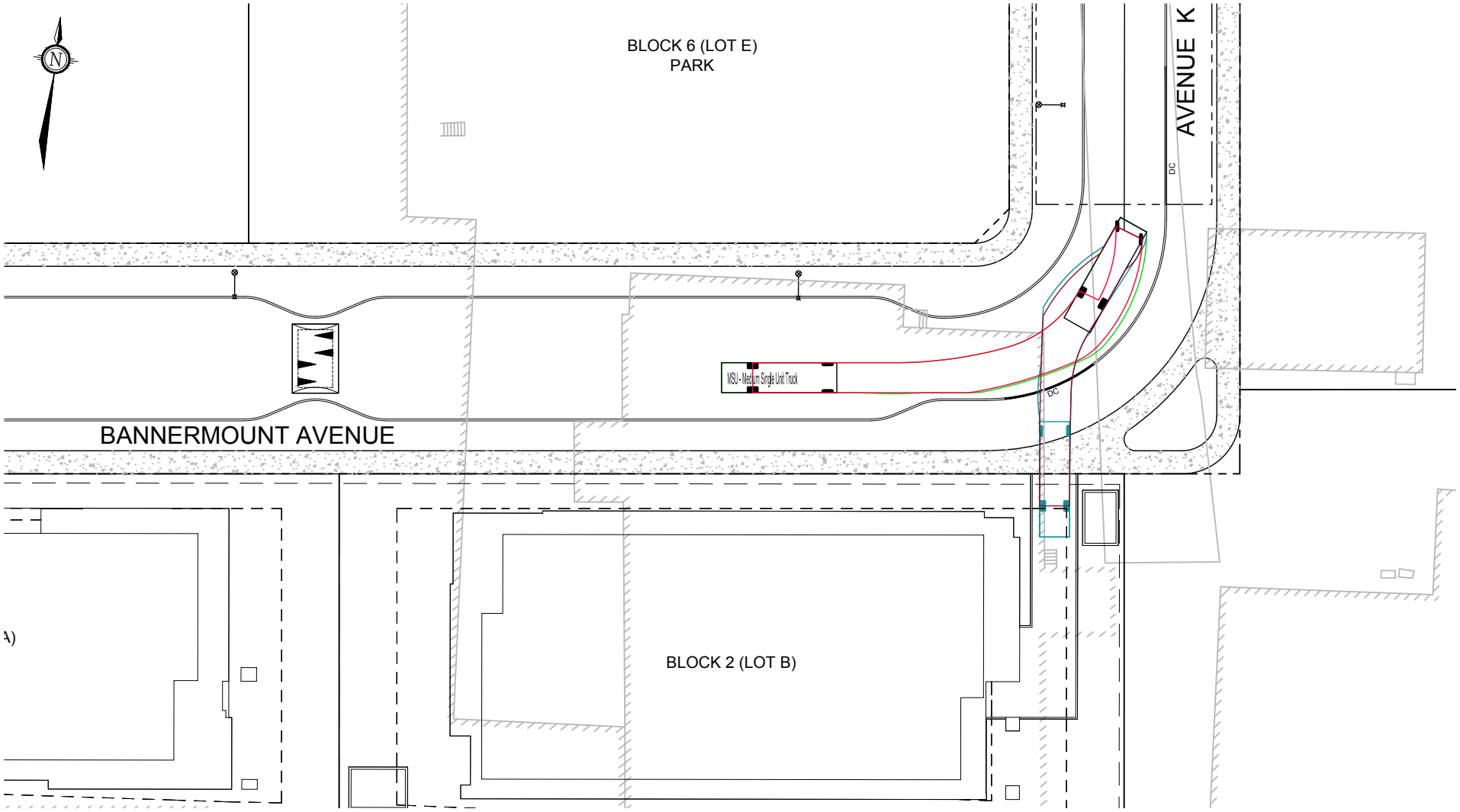
TURNING MOVEMENTS (LSU)

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

DATE APR 2024 | JOB 119240 | FIGURE FIGURE 7

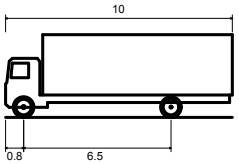
C:\temp\AcPublish_19000\119240-TM.dwg, Fig7, May 07, 2024 - 12:02pm, rhillier

SHT8X11.DWG - 216mmx279mm



NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6

Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com



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

25 PICKERING AVENUE
LOT A

TURNING MOVEMENTS (MSU)

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

DATE APR 2024 | JOB 119240 | FIGURE FIGURE 8

C:\temp\AcPublish_19000\119240-TM.dwg, Fig8, May 07, 2024 - 12:02pm, rhillier

SHT8X11.DWG - 216mmx279mm

4.2 Parking

The subject site is located in Area B of Schedule 1 and Area Z of Schedule 1A of the City's ZBL. Per Section 101(2) no off-street motor vehicle parking is required for tenants or ground floor commercial. Per Section 102 visitor parking spaces are required at a minimum rate of 0.1 parking spaces per unit after the first 12 dwelling units and the minimum required visitor parking shall not exceed 30 parking spaces per building.

Minimum and maximum vehicle parking rates and minimum bicycle parking rates for the proposed development is summarized in **Table 5**.

Table 5: Parking Requirements

Land Use	Rate	Units/GFA	Required	Proposed
Minimum Vehicle Parking Requirements				
Dwelling Units within Mixed-Use Building	Residents: None	483	0	204
	Visitor: 0.1 per dwelling unit after the first 12 dwelling units		46	46
		Total	**46**	**250**
Minimum Bicycle Parking Requirements				
High Rise Apartment	0.5 per dwelling unit	483	242	373
Retail	1.0 per 250m² of GFA	279m²	1	
		Total	**243**	**373**
Maximum Vehicle Parking				
High Rise Apartment	1.75 per dwelling unit	483	846	250
		Total	**846**	**250**

The proposed development includes 46 visitor parking spaces. As the development provides 46 visitor parking spaces the minimum vehicle parking requirement is met.

A total of 373 bicycle parking spaces are proposed, which meets the 243 bicycle parking spaces as required by the Zoning By-law.

The proposed development includes 250 parking spaces for residents and visitors. Per the Zoning By-law a maximum of 846 parking spaces is allowed for this development. As 250 parking spaces are provided the development does not exceed the maximum number of allowable parking spaces.

4.3 Boundary Street Design

This section provides a review of the boundary streets Pickering Place and Bannermount Avenue using complete streets principles. The Multi-Modal Level of Service (MMLOS) Guidelines, produced by IBI Group in October 2015, and the 2017 MMLOS Addendum were used to evaluate the levels of service for each alternative mode of transportation on the boundary streets. The subject site is located within a Mixed Use Centre (per Schedule B of the City's previous Official Plan, which is referenced by the MMLOS Guidelines).

A detailed segment MMLOS review of the boundary streets is included in **Appendix I**. A summary of the segment MMLOS analysis is provided in **Table 6**.

Table 6: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Pickering Place	**F**	C	**F**	D	-	-	B	-
Bannermount Avenue	A	C	D	D	-	-	E	-

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

- Pickering Place does not meet the target pedestrian level of service (PLOS);
- Pickering Place does not meet the target bicycle level of service (BLOS);
- No target transit level of service (TLOS) has been identified for Pickering Place or Bannermount Avenue and the actual TLOS has not been studied as no transit routes exist on Pickering Place or Bannermount Avenue; and
- Pickering Place and Bannermount Avenue do not have a target truck level of service (TkLOS) however Pickering Place achieves a TkLOS B and Bannermount Avenue achieves a TkLOS E.

Pedestrian Level of Service
The east side of Pickering Place does not meet the target PLOS C as there is no existing sidewalk. The west side of Pickering Place achieves the target PLOS C. A sidewalk on the east side of Pickering Place south of Bannermount Avenue is proposed as part of this site plan. A sidewalk can be considered on the east side of Pickering Place as part of the future site plan application for Block D of the 25 Pickering Place subdivision north of Bannermount Avenue.

Bicycle Level of Service
Pickering Place does not meet the target BLOS D. On Pickering Place a BLOS B can be achieved by either reducing the posted speed to 40km/h or painting 1.2m wide bike lanes. A reduced posted speed limit is considered appropriate for the 7m road width planned as part of the 25 Pickering subdivision. North of the subdivision the existing 10.5m road width is sufficient for two 1.25m bike lanes and two 4m travel lanes. This is identified for the City's consideration.

4.4 Transportation Demand Management

4.4.1 Context for TDM

The proposed development will consist of two residential buildings with ground floor commercial and an underground parking area that provides parking for both buildings. Building 1 is 28-storeys high and has 309 dwelling units and roughly 130m² of ground floor retail. Building 2 is 14-storeys high and has 174 dwelling units and roughly 148m² of ground floor retail. A total of 250 vehicle parking spaces and 373 bicycles parking spaces are provided in the underground parking area.

4.4.2 Need and Opportunity

New intersection analysis has not been prepared as it was previously prepared for the parent 2020 TIA related to Draft Plan and Zoning applications for the subdivision. This TIA assumes the same modal share as the parent study. As the development is located in the Tremblay TOD zone the following mode share was assumed:

- 15% Auto Driver;
- 5% Auto Passenger;

- 65% Transit; and
- 15% Walking and Cycling.

It is expected that the TOD Zone modal share will be met, due to the proximity of the subject site to the Tremblay LRT Station and other public transit as well as pedestrian and cyclist facilities in the area including the Max Keeping walking bridge and multi-use pathways along Tremblay Road and Belfast Road.

4.4.3 TDM Program

A review of the City's *TDM Measures Checklist* has been conducted. The proponent has committed to providing the following TDM measures within this development:

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

A copy of the checklist is included in **Appendix H**.

5.0 CONCLUSIONS AND RECOMMENDATIONS

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

Forecasting

- As the current site plan proposes 96 fewer dwelling units and a decrease in ground floor commercial the trip generation and traffic analysis presented in the 2020 TIA is a conservative analysis.

Development Design

- Sidewalks will be provided between the proposed development and adjacent roadways and will connect to the main building entrances.

- Bicycle parking will be provided within the underground parking garage.

- OC Transpo stops #1369, #1371, #1836, #1837, and #3024 are within 400m walking distance of all entrances to the proposed development.

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

- Sufficient intersection sight distance is available at each access for all turning movements.

Parking

- The proposed development includes 46 visitor parking spaces. As the development provides 46 visitor parking spaces the minimum vehicle parking requirement is met.

- A total of 373 bicycle parking spaces are proposed, which meets the 243 bicycle parking spaces as required by the Zoning By-law.

- The proposed development includes 250 parking spaces for tenants and visitors of the building. Per the Zoning By-law a maximum of 846 parking spaces is allowed for this development. As 250 parking spaces are provided the development does not exceed the maximum number of allowable parking spaces.

Boundary Streets

- A sidewalk on the east side of Pickering Place south of Bannermount Avenue is proposed as part of this site plan. A sidewalk can be considered on the east side of Pickering Place as part of the future site plan application for Block D of the 25 Pickering Place subdivision north of Bannermount Avenue.

- Pickering Place does not meet the target Bicycle Level of Service (BLOS) D. On Pickering Place a BLOS B can be achieved by either reducing the posted speed to 40km/h or painting 1.2m wide bike lanes. A reduced posted speed limit is considered appropriate for the 7m road width planned as part of the 25 Pickering subdivision. North of the subdivision the 10.5m road width is sufficient for two 1.25m bike lanes and two 4m travel lanes. This is identified for the City's consideration.

Access Design

- As the Pickering Place access meets Pickering Place at a perpendicular angle and no sightline obstructions have been identified based on a desktop review, available sightlines are within recommended guidelines to allow safe all directional access to the development.

- The proposed accesses adhere to all provisions of the City's Private Approach By-law.

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

NOVATECH

Prepared by:

Trevor Van Wiechen, M.Eng.
E.I.T. | Transportation

Reviewed by:

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

APPENDIX A

Site Plan

LOT A - BUILDING 1 (WEST) - ZONING TABLE				
Current Zoning		1135 [2836] 5468		
Site Area		1966.5Q.M.		
Number of Dwelling Units		309		
Dwelling Unit Ratios		**TYPE**	**NO.**	**%**
		Studio	54	17%
		1 Bed (Internal)	27	9%
		1 Bed	117	38%
		1 Bed + Den	6	2%
		2 Bed	105	34%
		REQUIRED	**PROVIDED**	
Lot Area		No minimum	1966.5Q.M.	
Lot Frontage		No minimum	30.2 m (irregular)	
Minimum Lot Width		-	60.2 m (irregular)	
Setbacks	**Front Yard (Pickering)**	0.5 m	3.8 m	
	Corner Side Yard (Bannermount)	0.5 m	2.6 m	
	Interior Side Yard	3 m	3.7 m	
	Rear Yard	5 m	9.8 m	
Maximum Building Height		90 m	90 m	
Area - Building Area		1092 m		
Area - Typical Podium		1162 m		
Area - Typical Tower Plate		907 m		
Area - Total Gross Building Area (GBA)		+/- 24,117 m		
Area - Total Gross Floor Area (GFA - City def.)		+/- 19,720 m		
Amenity Area **Total of 6m² per dwelling unit of which 50% is required to be communal**		Total (6m² per dwelling unit): 1854 m² Communal (50% of required total): 927 m²	Private Amenity Space: 1271 m² Common Amenity Space: 941 m² Total Amenity Space: 2212 m²	
Parking (Combined - Three Levels)		**Minium Required:** Visitors: (483-(12x2)) x .1 = 46 spaces	**Maximum Required:** Residential (483 units) x 1.75 = 846 spaces + Visitor: (483-(12x2)) x .1 = 46 spaces = 892 spaces total	**Total Provided:** 250 spaces (0.52 ratio) Residential: 204 spaces (0.42 ratio) Visitors: 46 spaces (0.1 ratio after 24 units deducted (12 from each building)
Bycycle Parking Requirments Residential: .5 spaces/ unit.		**Minium Required:** Residential: 483 x .5 = 242 spaces		**Total Provided:** 373 spaces (186 vertical + 188 horizontal) = 0.77 ratio Outdoor: N/A Indoor: 373 spaces (located at grade (int.) and in parking garage)

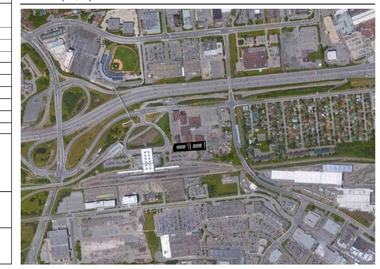
LOT B - BUILDING 2 (EAST) - ZONING TABLE				
Current Zoning		1135 [2836] 5468		
Site Area		2242.5Q.M.		
Number of Dwelling Units		174		
		TYPE	**NO.**	**%**
		Studio	46	27%
		1 Bed (Internal)	-	-
		1 Bed	92	53%
		1 Bed + Den	4	2%
		2 Bed	32	18%
		REQUIRED	**PROVIDED**	
Lot Area		No minimum	2242.5Q.M.	
Lot Frontage		No minimum	68.0 m (irregular)	
Minimum Lot Width		-	31.6 m (irregular)	
Setbacks	**Front Yard (Bannermount)**	0.5 m	2.7 m	
	Interior Side Yard	5 m	9.0 m	
	Interior Side Yard	5 m	9.8 m	
	Rear Yard	3 m	3.8 m	
Maximum Building Height		90 m	90 m	
Area - Building Area		1170 m		
Area - Typical Podium		1193 m		
Area - Typical Tower Plate		881 m		
Area - Total Gross Building Area (GBA)		+/- 13,958 m		
Area - Total Gross Floor Area (GFA - City def.)		+/- 11,181 m		
Amenity Area **Total of 6m² per dwelling unit of which 50% is required to be communal**		Total (6m² per dwelling unit): 1044 m² Communal (50% of required total): 522 m²	Private Amenity Space: 446 m² Common Amenity Space: 1068 m² Total Amenity Space: 1514 m²	

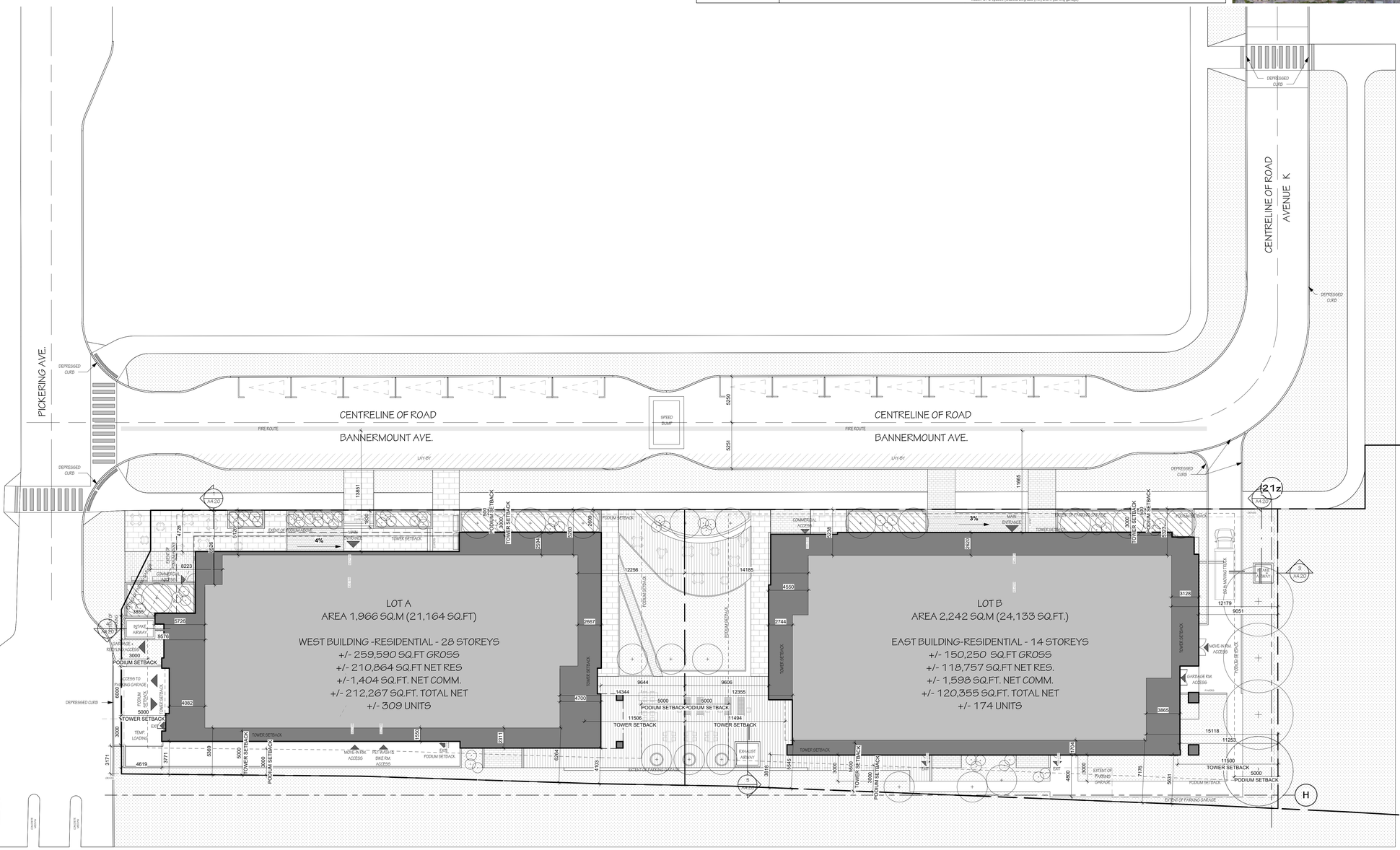
NOTE: ALL EXISTING SITE INFORMATION AS PER TOPOGRAPHICAL SURVEY PLAN DATED JANUARY 21, 2020
PREPARED BY: ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
PART 1 PLAN OF LOTS 457, 458, 459, 460, 466, 467 AND LOTS 470 TO 482
(INCLUSIVE) AND LOTS 497 TO 503 (INCLUSIVE) AND LOTS 506 TO 522
(INCLUSIVE) AND PART OF LOTS 461, 462, 463, 464, 465 AND PART OF AVENUE
J CLOSED BY BY-LAW 183-50 (INST. OT32677) AND BY-LAW 8-67 (INST. OT740446)
AND PART OF AVENUE K CLOSED BY BY-LAW 127-50 (INST. OT2256)
REGISTERED PLAN 320 CITY OF OTTAWA

LEGEND:

- PROPOSED PODIUM
- PROPOSED TOWER
- PROPERTY BOUNDARY
- SETBACKS
- PROPOSED FIRE ROUTE
- PARKING GARAGE BELOW
- EDGE OF SIDEWALK
- CONC. CURB DETAIL TO CITY OF OTTAWA STANDARDS

LOCATION PLAN (1:10,000)





2 / A1.00 **00-SITE PLAN**
SCALE: 1 : 200

COLONNADE BRIDGEPORT

NOT FOR CONSTRUCTION

Note: all existing site information as per site survey plan dated September 16, 2015 and prepared by STANTEC GEOMATICS ltd. Ref No. 161613356-310

date	revision

Hobin Architecture Incorporated
63 Pamilla Street
Ottawa, Ontario
Canada K1S 3K7
T: 613-238-7200
F: 613-235-2005
E: mail@hobinarc.com
hobinarc.com

HOBIN ARCHITECTURE

PROJECT
DESIGN OPTION 2

PROJECT ADDRESS

DRAWING TITLE
SITE PLAN

DRAWN	DATE	SCALE
Author	XX/XX/XXXX	As indicated

PROJECT
PROJECT NUMBER

DRAWING NO.
A1.00

REVISION NO.

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines TIA Screening

1. Description of Proposed Development

Municipal Address	25 Pickering Place
Description of Location	East of Pickering Pl, south of Tremblay Rd
Land Use Classification	High-rise residential with ground-floor commercial
Development Size (units)	490 residential units
Development Size square metre (m^2)	Approx. 700 m2 (7,540 ft2) commercial
Number of Accesses and Locations	One proposed access to Pickering Pl
Phase of Development	1
Buildout Year	2027

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

2. Trip Generation Trigger

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

Table notes:

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

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

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

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	☐	☑
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?[2]	☑	☐

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

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 kilometers per hour (km/h) or greater?	☐	☑
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	☐	☑
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 metre [m] of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	☐	☑
Is the proposed driveway within auxiliary lanes of an intersection?	☐	☑
Does the proposed driveway make use of an existing median break that serves an existing site?	☐	☑

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

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

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

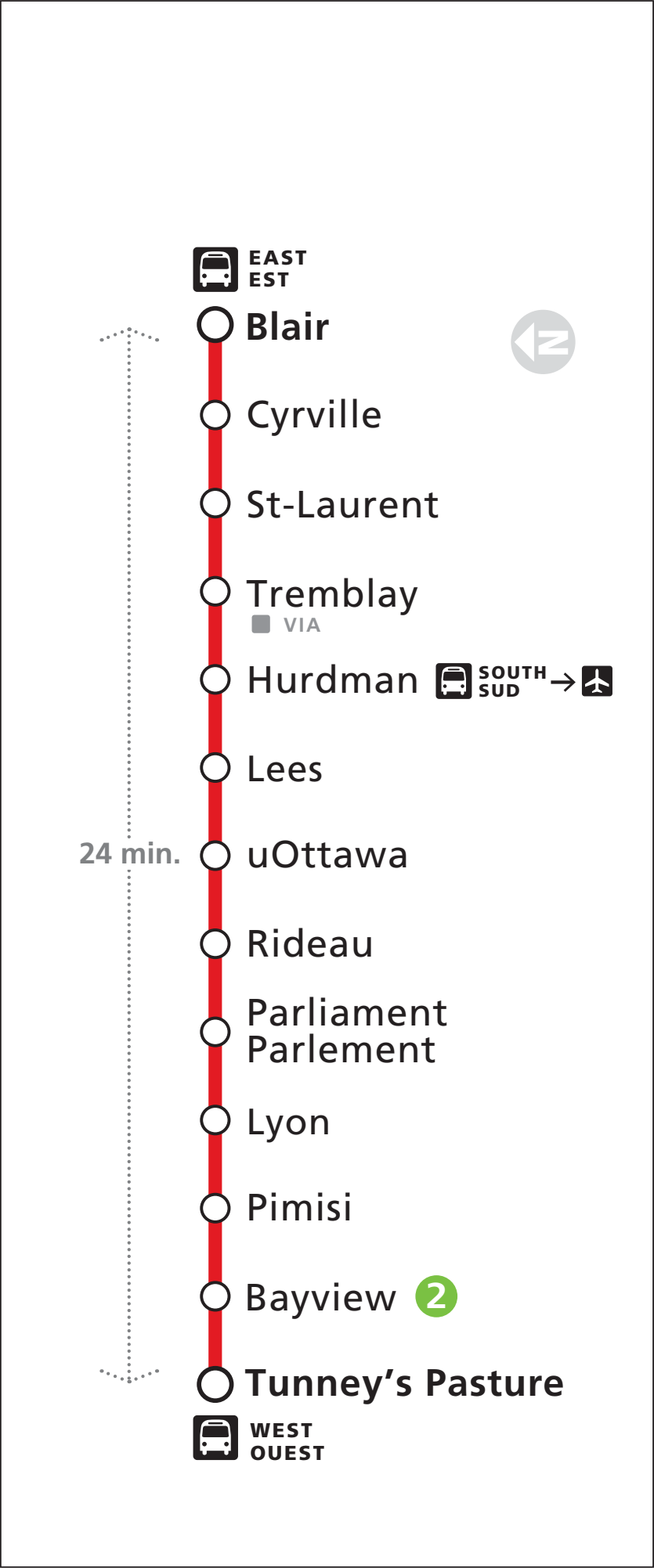
5. Summary

Results of Screening	Yes	No
Does the development satisfy the Trip Generation Trigger?	☑	☐
Does the development satisfy the Location Trigger?	☑	☐
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


EAST
EST
Blair
Cyrville
St-Laurent
Tremblay
VIA
Hurdman
SOUTH
SUD
Lees
24 min.
uOttawa
Rideau
Parliament
Parlement
Lyon
Pimisi
Bayview
2
Tunney's Pasture
WEST
OUEST

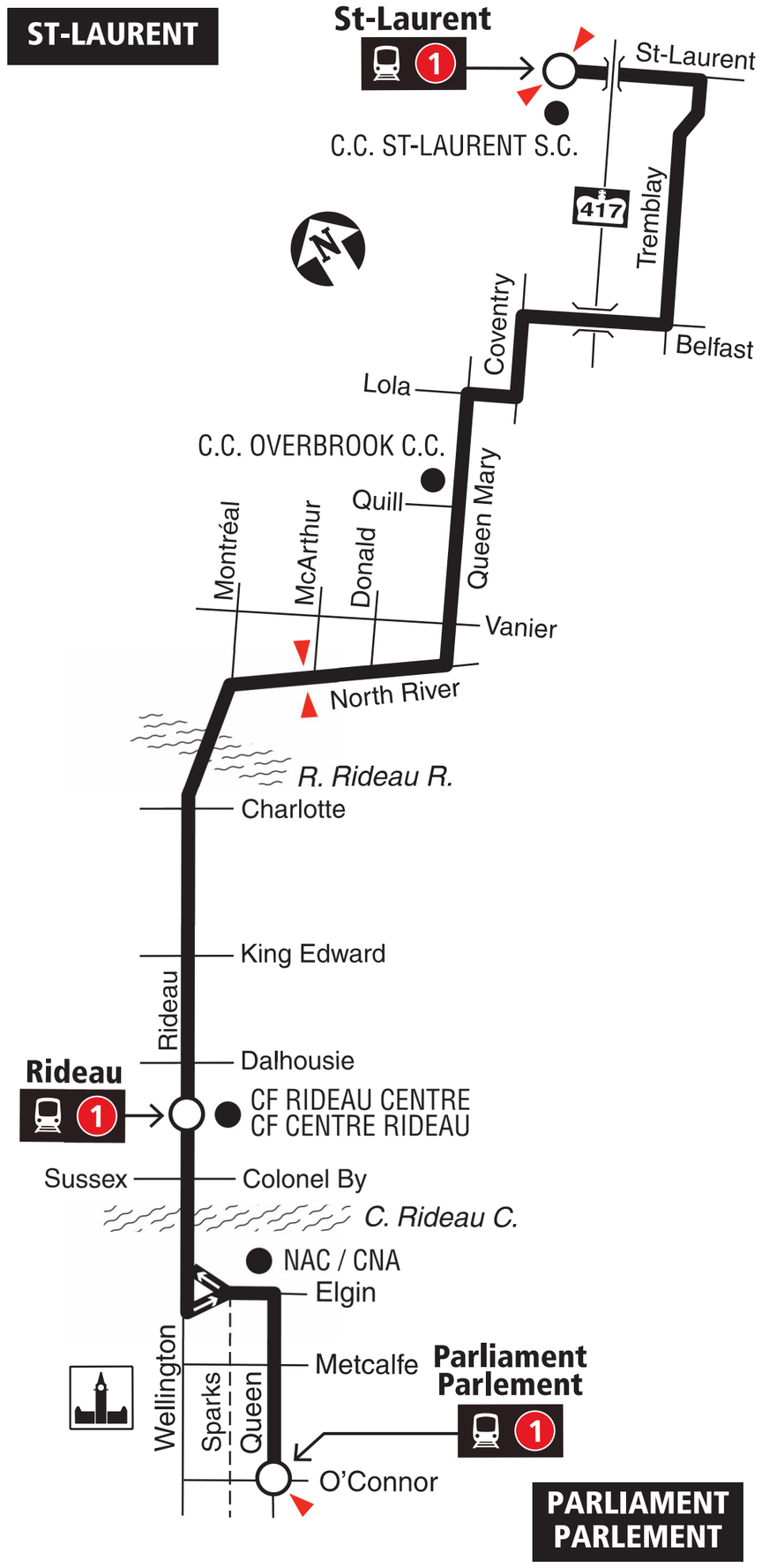
18

ST-LAURENT

PARLIAMENT
PARLEMENT

Local

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



2023.08

Station

Timepoint / Heures de passage

2023.08

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

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

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

Security / Sécurité **613-741-2478**

Effective August 27, 2023
En vigueur 27 août 2023

OC Transpo

INFO 613-560-5000
octranspo.com

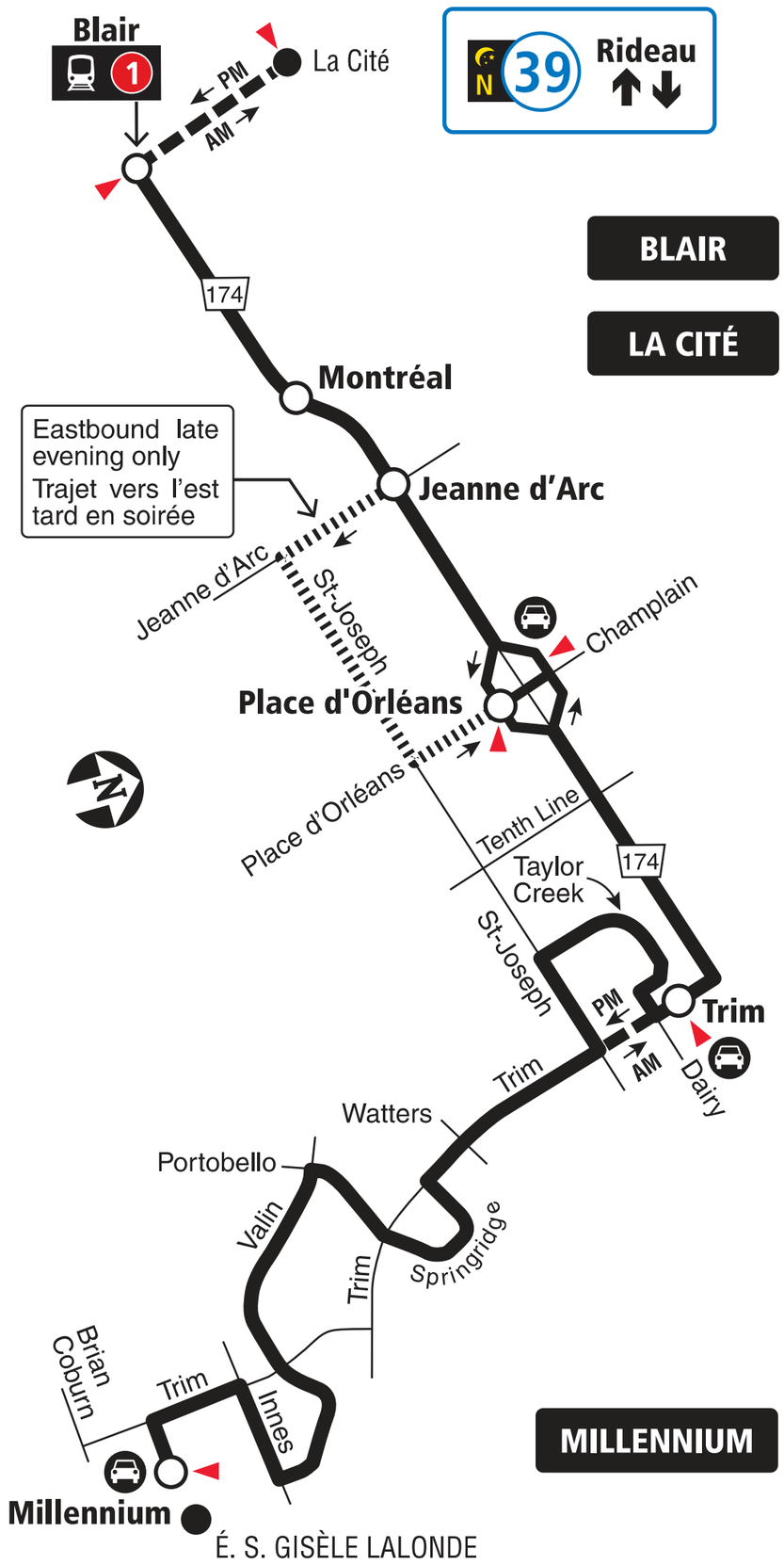
39 Rapide

MILLENNIUM

BLAIR
LA CITÉ

7 days a week / 7 jours par semaine

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



Station

Peak periods / Périodes de pointe

Park & Ride / Parc-o-bus

Timepoint / Heures de passage

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

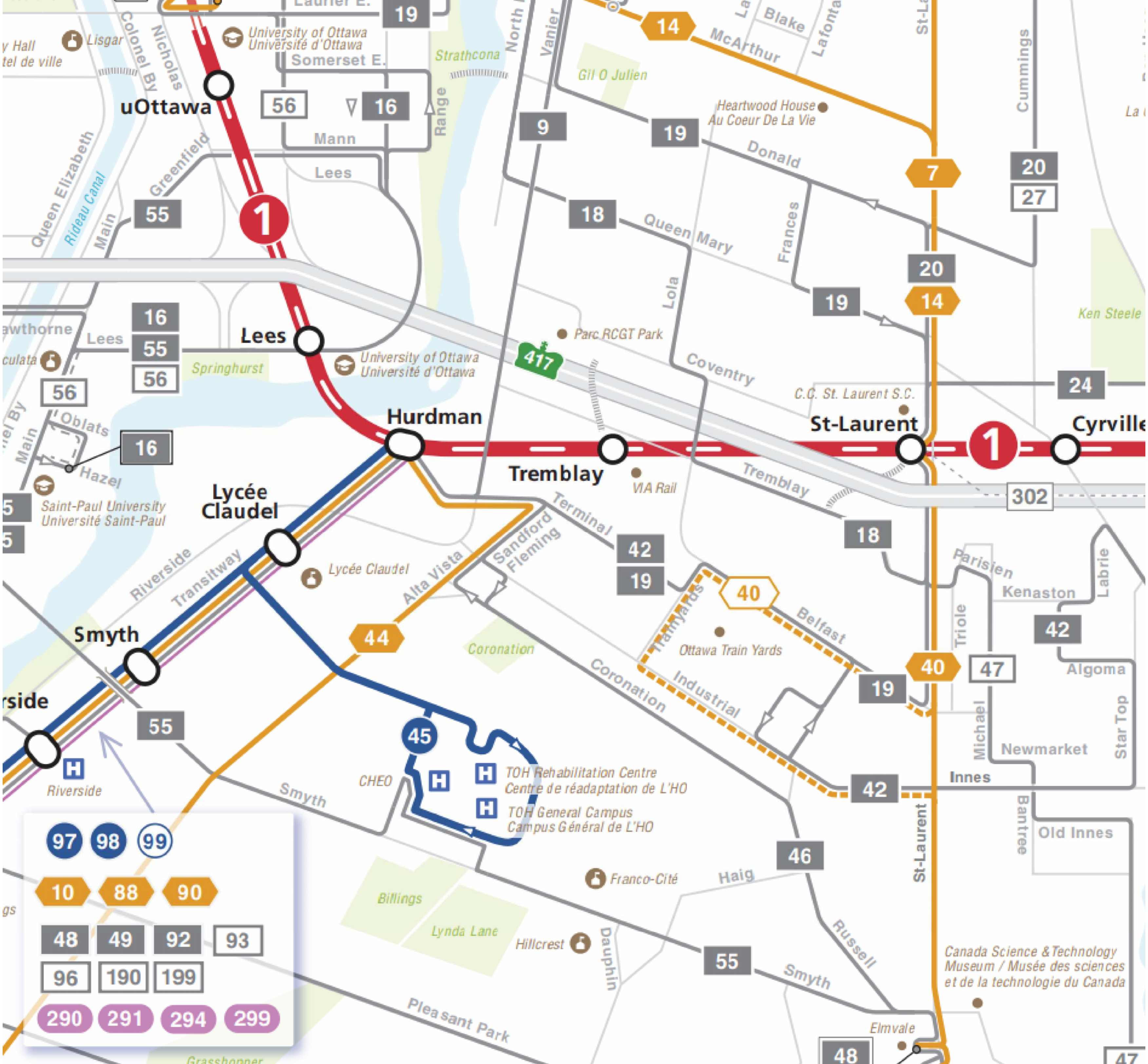
2019.07

1

Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité..... **613-741-2478**

OC Transpo **INFO 613-741-4390**
octranspo.com



Lisgar
University of Ottawa
Université d'Ottawa
Somerset E.
Strathcona
uOttawa
Colonel By
Nicholas
Gil O Julien
Heartwood House
Au Coeur De La Vie
McArthur
Blake
Lafontaine
Cummings
Mann
Lees
Range
Greenfield
Queen Elizabeth
Rideau Canal
Main
Donald
Queen Mary
Frances
Lola
Ken Steele
Lees
Springhurst
University of Ottawa
Université d'Ottawa
Parc RCGT Park
Coventry
C.C. St. Laurent S.C.
Oblats
Hazel
Saint-Paul University
Université Saint-Paul
Hurdman
Tremblay
VIA Rail
St-Laurent
Cyrville
Tremblay
Terminal
Lycée Claudel
Lycée Claudel
Riverside
Transitway
Alta Vista
Sandford Fleming
Parisien
Kenaston
Labrie
Triole
Smyth
Trainyards
Ottawa Train Yards
Belfast
Coronation
Coronation
Industrial
Algoma
Michael
Newmarket
Star Top
Innes
Riverside
CHEO
TOH Rehabilitation Centre
Centre de réadaptation de L'HO
TOH General Campus
Campus Général de L'HO
Smyth
Bantree
Old Innes
St-Laurent
Franco-Cité
Haig
Billings
Lynda Lane
Hillcrest
Dauphin
Russell
Smyth
Canada Science & Technology
Museum / Musée des sciences
et de la technologie du Canada
Pleasant Park
Elmvale
Grasshopper
1
9
14
16
18
19
20
24
27
40
42
44
45
46
47
48
55
56
302
417
97 98 99
10 88 90
48 49 92 93
96 190 199
290 291 294 299

APPENDIX D

Traffic Count Data

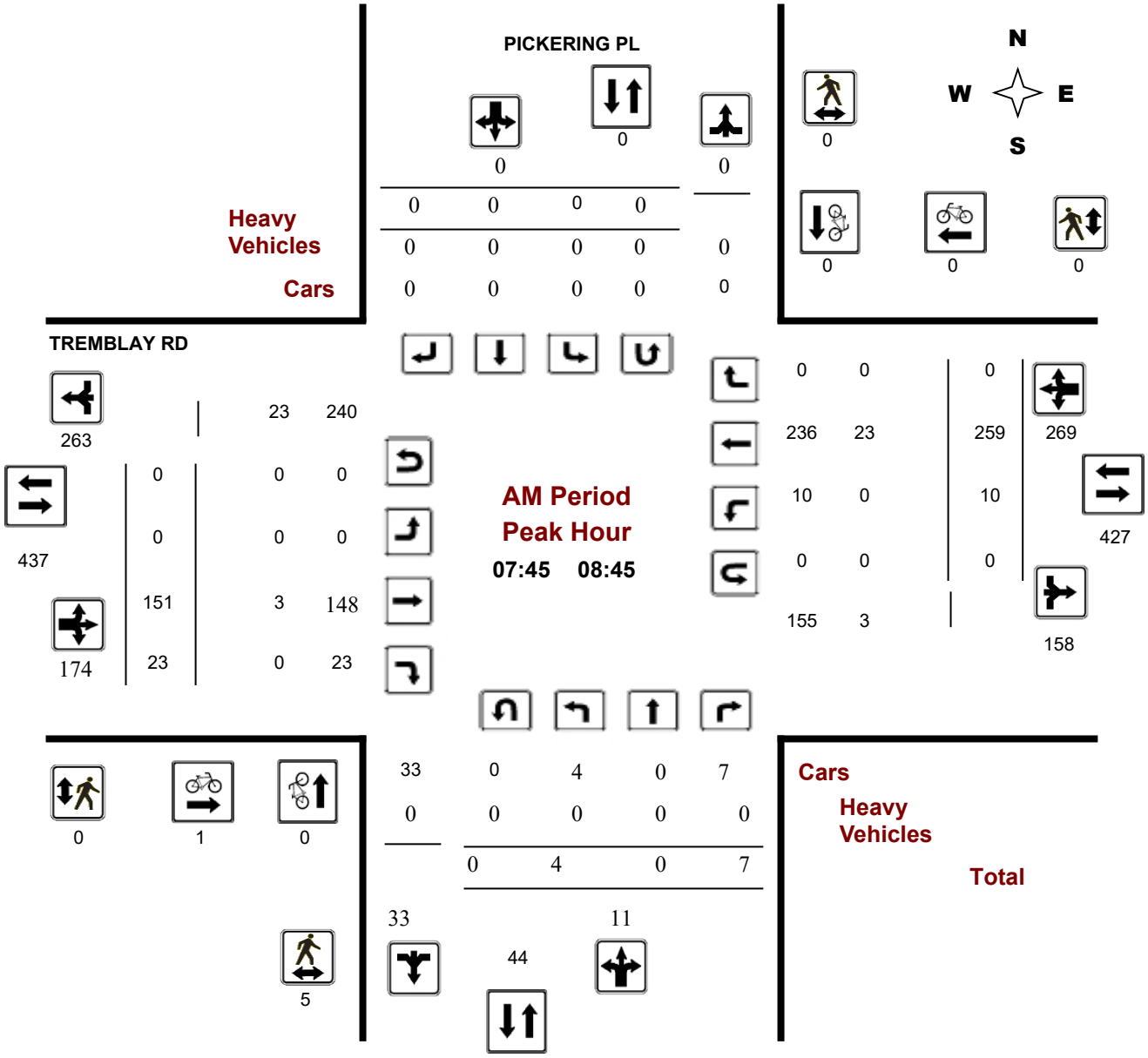
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PICKERING PL @ TREMBLAY RD

Survey Date: Tuesday, January 27, 2015 **WO No:** 34317

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



Comments

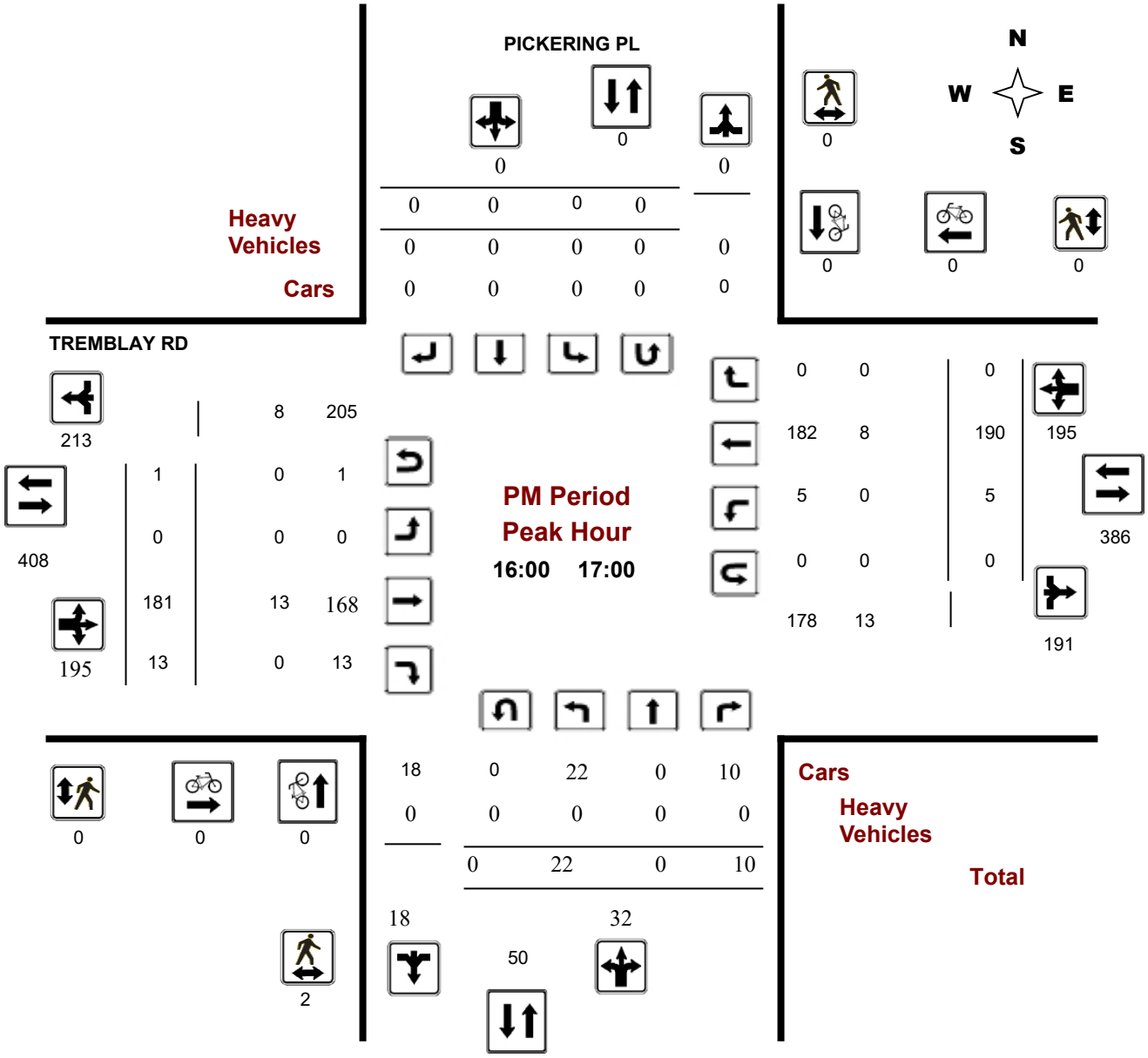
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PICKERING PL @ TREMBLAY RD

Survey Date: Tuesday, January 27, 2015 **WO No:** 34317

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



Comments

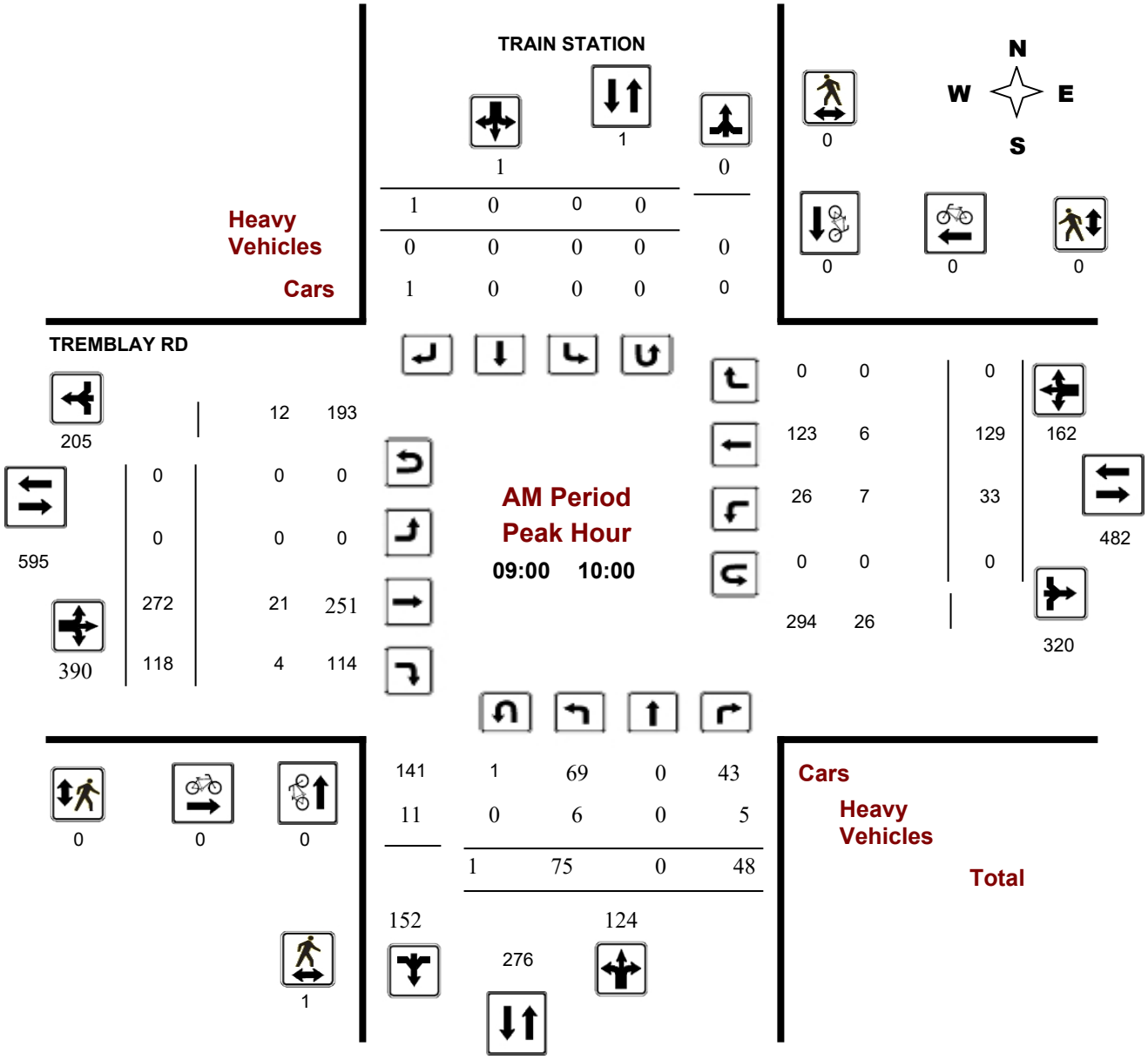
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

TREMBLAY RD @ TRAIN STATION

Survey Date: Wednesday, January 30, 2019 **WO No:** 38347

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



Comments

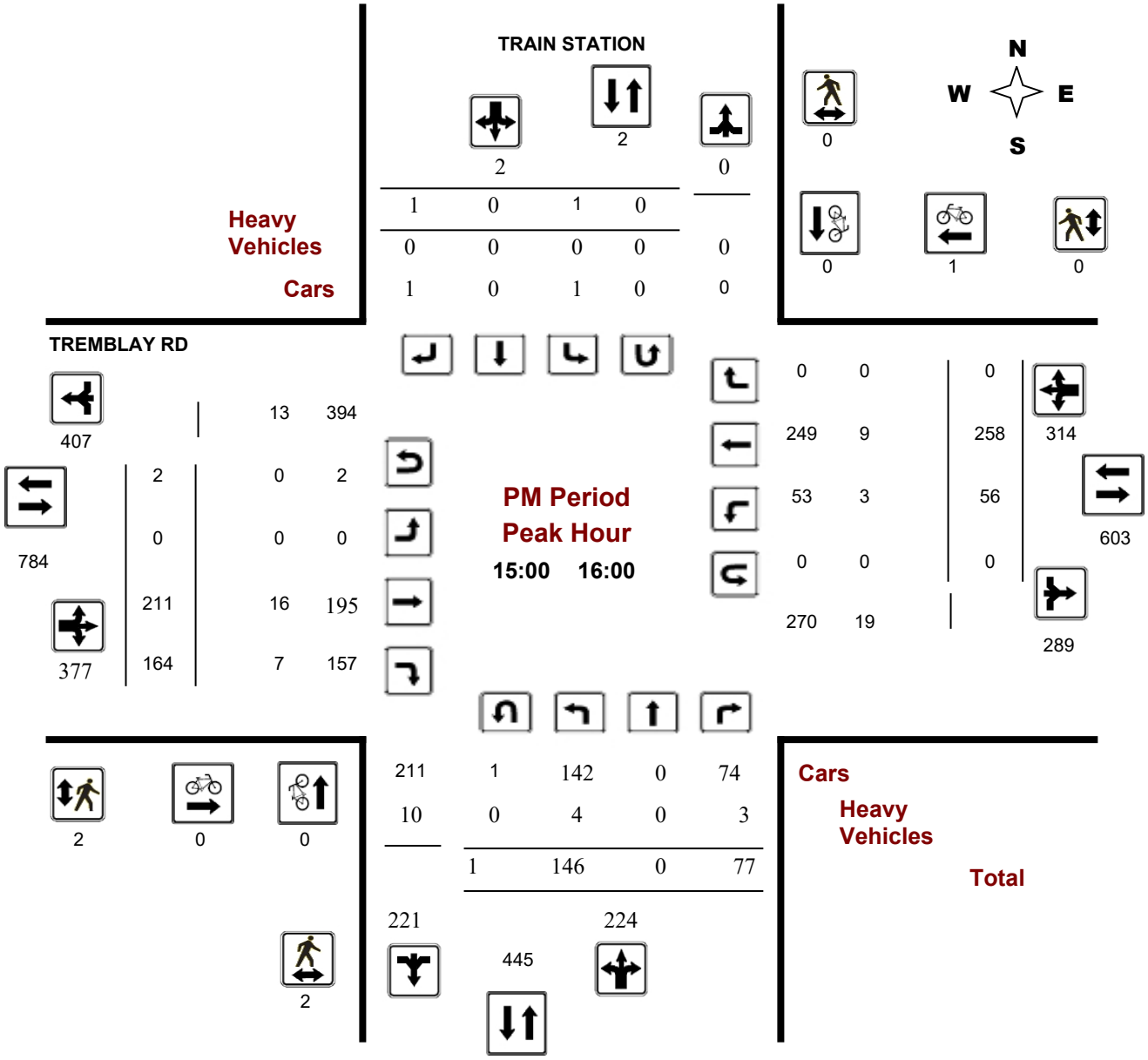
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

TREMBLAY RD @ TRAIN STATION

Survey Date: Wednesday, January 30, 2019 **WO No:** 38347

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



Comments

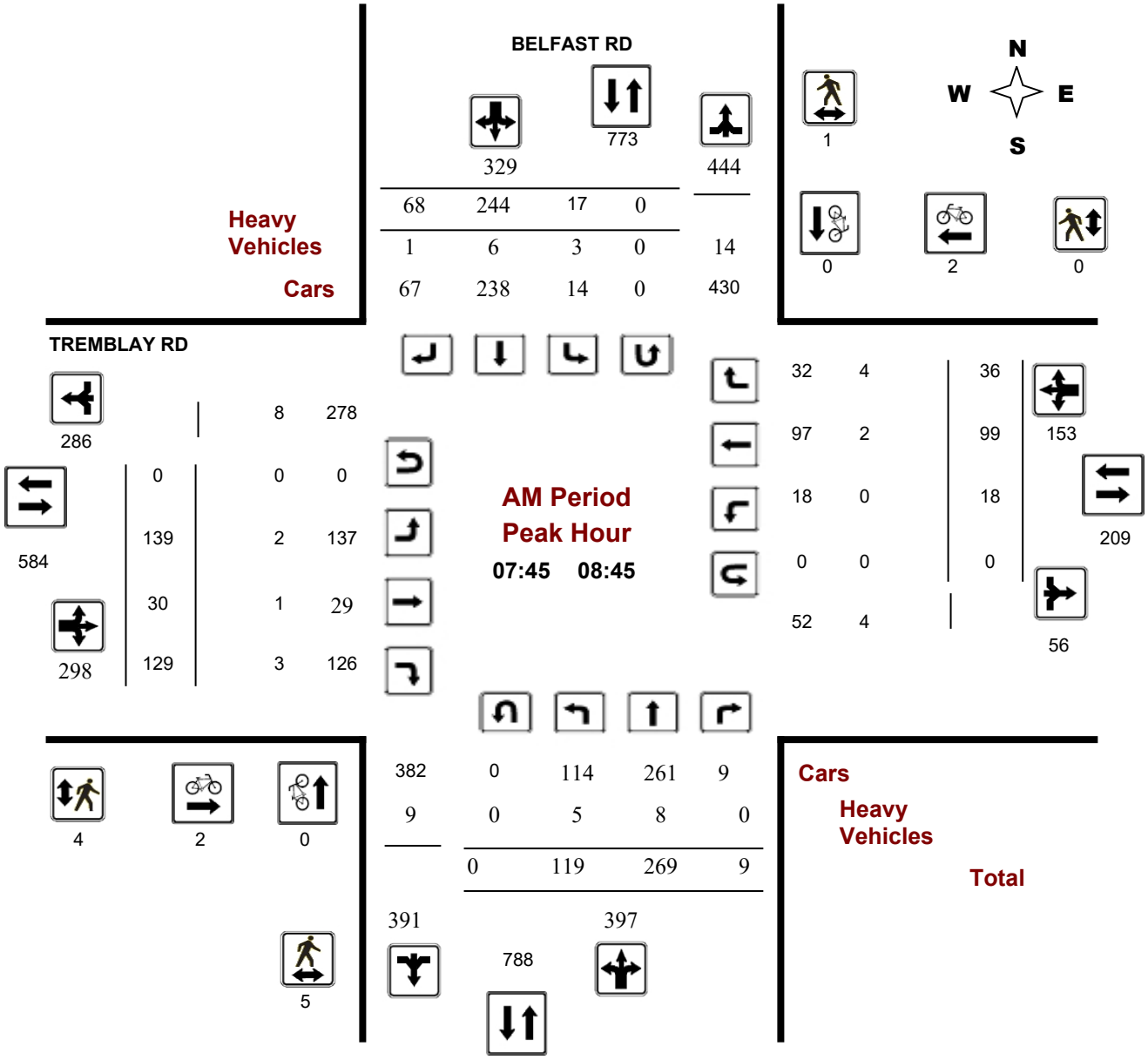
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, January 08, 2020 **WO No:** 39277

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



Comments 5469218 - WED JAN 08, 2020 - 8HRS - LORETTA

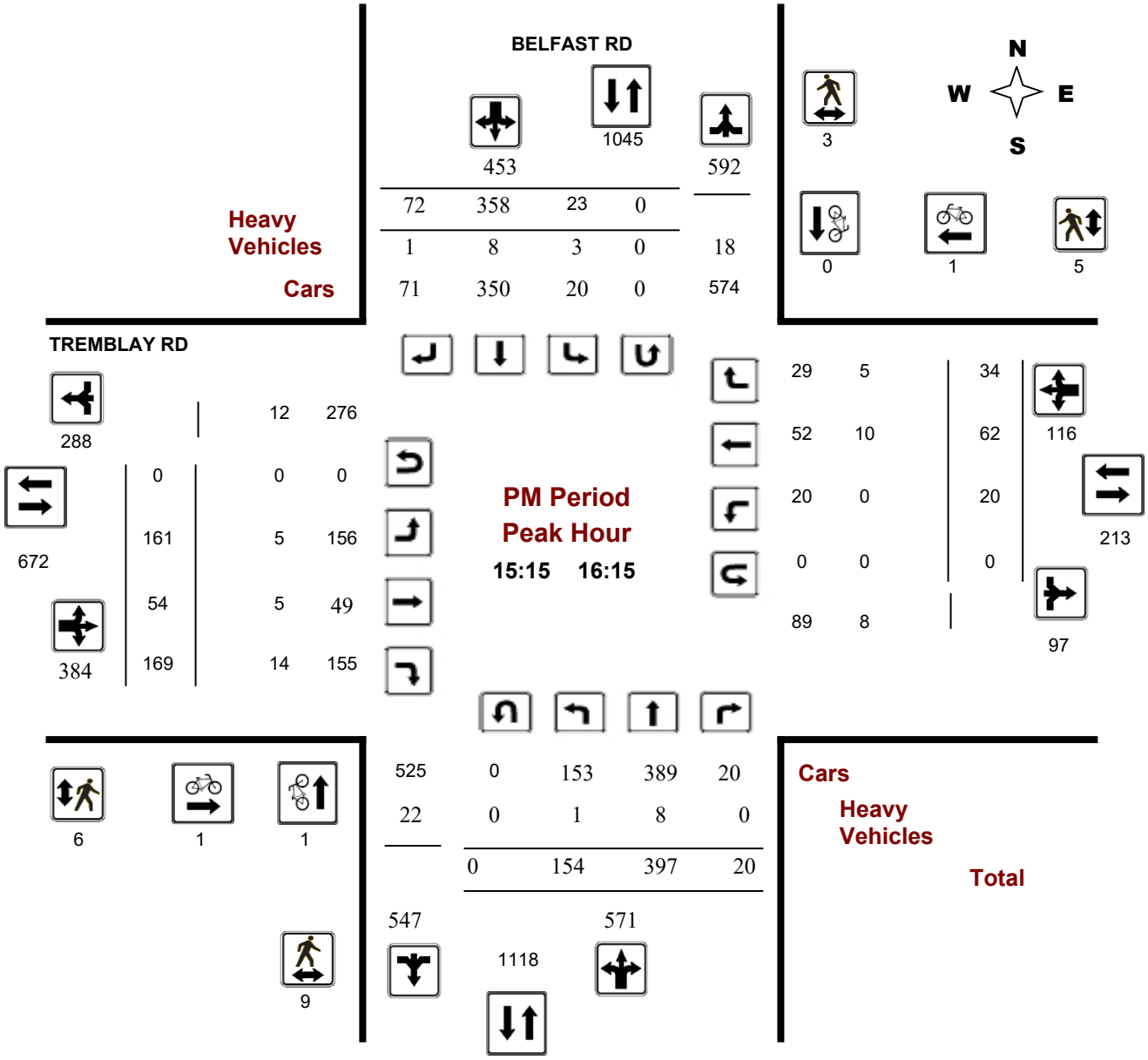
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, January 08, 2020 **WO No:** 39277

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



Comments 5469218 - WED JAN 08, 2020 - 8HRS - LORETTA

APPENDIX E

Collision Records

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: PICKERING PL @ TREMBLAY RD

Traffic Control: Stop sign **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Nov-10, Wed,13:01	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Truck - open	Other motor vehicle	

APPENDIX F

Tremblay TOD Zone

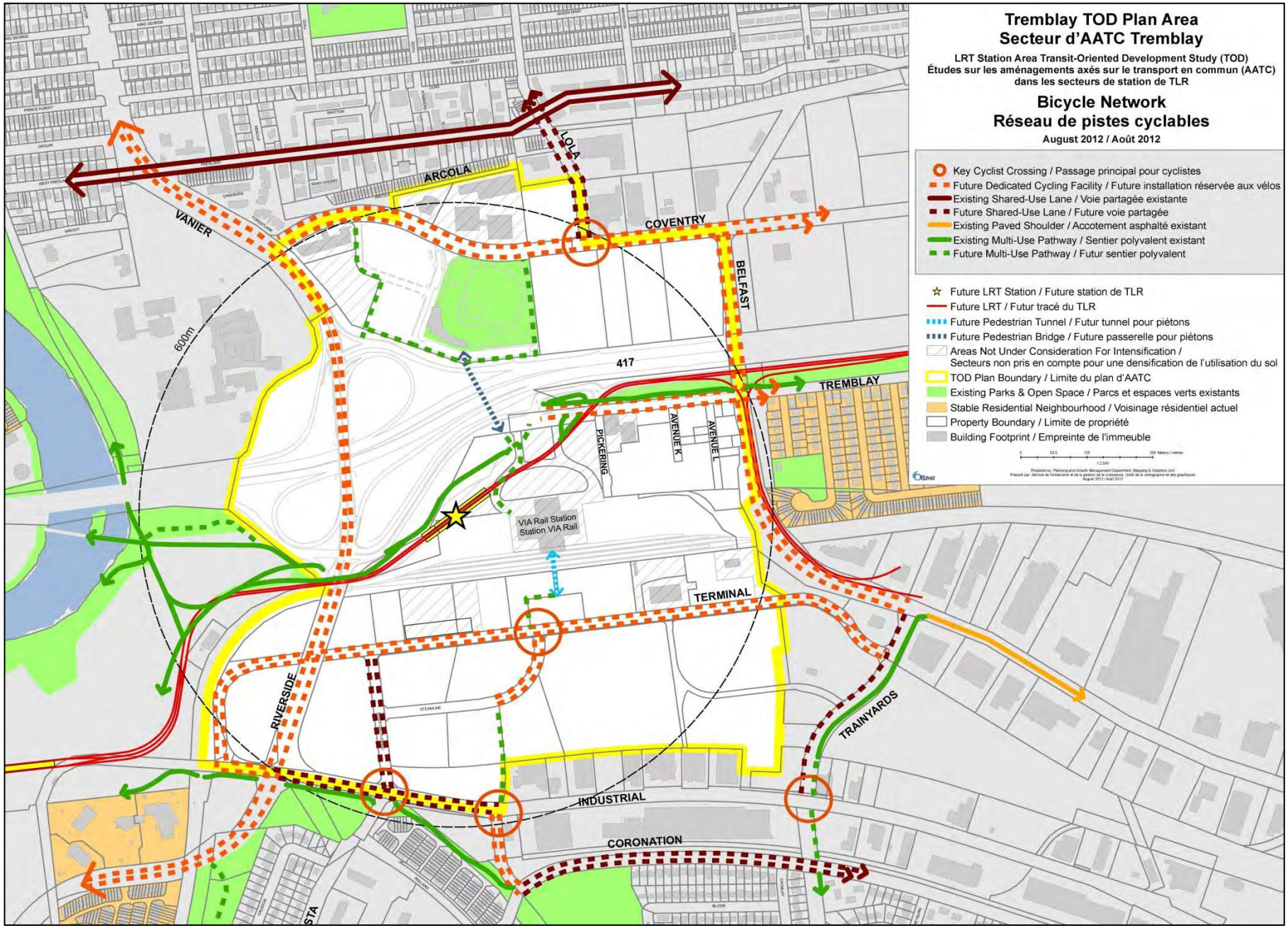
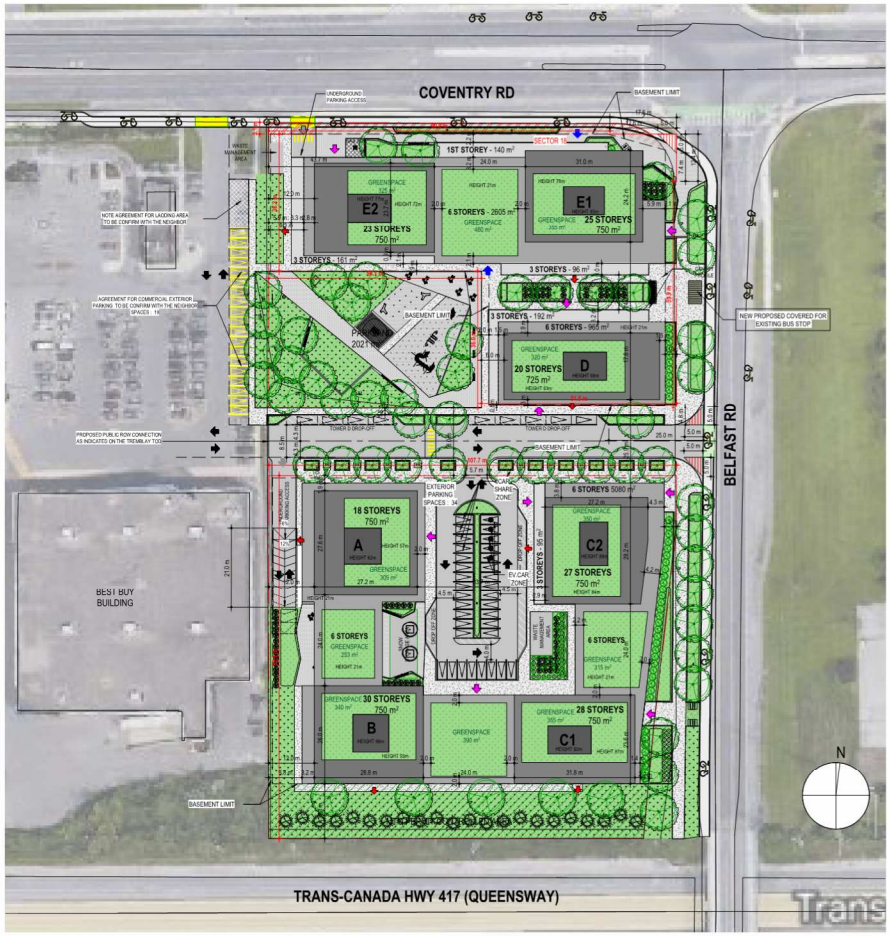


Figure 37: Tremblay Bicycle Network

APPENDIX G

Background Reports



SITE INFORMATION

SITE AREA (LOT AREA)	
NORTH SIDE	5,715
SOUTH SIDE	8,554

HEIGHT			Roof	Mechanical
NORTH site	TOWER E1	25 Storeys	78m	83m
	TOWER E2	23 Storeys	72m	77m
	TOWER D	20 Storeys	63m	68m
SOUTH site	TOWER A	18 Storeys	57m	62m
	TOWER B	30 Storeys	93m	98m
	TOWER C1	28 Storeys	87m	92m
	TOWER C2	27 Storeys	84m	89m

PARKING RATES	Required
Residentail	0.5 p/unit
Visitor	0.1 p/unit
Retail	1.25 p/100m²

AMENITIES RATE	
Required	6m²/unit

SETBACKS PROVIDED	NORTH	SOUTH	EAST	WEST
NORTH site	2.2m	0.8m	3m	5.9m
SOUTH site	2m	14.3m	2.2m	8.8m
MTO SETBACK			14m from HWY 147	

DEVELOPMENT STATISTICS

RESIDENTIAL UNITS	
Apartment	1768

*Assumes an 85% efficiency and 80m² average net unit size

ESTIMATED GFA	Retail	Residential
	1518	144355

TOTAL BUILDING AREA		Retail	Residential
	NORTH	1518	60135
	SOUTH	0	84840
	TOTAL	1518	144355

PARKING		Required	Provided
Residential	NORTH	355	377
	SOUTH	529	550
Visitor	NORTH	71	71
	SOUTH	106	106
Retail	NORTH	19	100
	SOUTH	0	0
Total	NORTH	445	548
	SOUTH	635	656
			1204

AMENITIES			
Required			6m2 x 1768 = 10608
Provided	NORTH SIDE	INTERIOR	220
		EXTERIOR	5081
	SOUTH SIDE	INTERIOR	629
		EXTERIOR	8466
			14396

PARKLAND DEDICATION	
Required	
Provided	2021

LOT COVERAGE		
Total lot area (including park)		16,290
Built up area; excluding park and road		8856
Precentage: 58% 54.36464088	NORTH	4079
	SOUTH	4777
Landscaped surfaces: hard and soft	NORTH	3.657
Percentage: 42% 45.63535912	SOUTH	3,777

NOTES

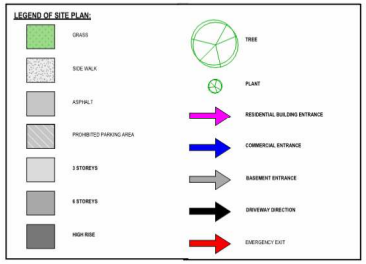
1. Assumes typical residential floor height of 3m. Assumes retail ground floor height of 6m.

2. For the purpose of this concept, an average of 80m^2 (860sf) unit size is used to calculate the approximate total nuber of units.

3. The base plan (lot lines, existing roads and surrounding areas)is based on the City's open plan data and aerial images. The site area is approximate and all dimensions need to be confirmed by a legal survey.

4. This concept considers the internal street envisioned in the Tremblay TOD plan as a public right-of-way, allowing for the park to be located in a more pedestrian scale streetscape. this solution would depend on negotiations with other landowners and temporary easements to allow for a road loop towards Coventry Road. In the case of the internal street being a private street or multi-use path, the park would likely need to be relocated to a public street frontage (Coventry Rd or Belfast Rd) reducing the commercial frontage.

400 COVENTRY RD OTTAWA



No. REVISION	DATE: 2023.06.01	BY: CR

NEUF
ARCHITECT(E)S
630 René-Lévesque blvd W Suite 3200, Montreal, Quebec H3B 1S6
www.neufarchitectes.com

DESIGNED	CR
REVIEWED	SP
DATE	2023.05.24

5.4 Trip Assignment

Using the distribution outlined above, turning movement splits, and access to major transportation infrastructure, the trips generated by the site have been assigned to the study area road network. Table 14 summarizes the proportional assignment to the study area roadways, Figure 18 and Figure 19 illustrate the new site-generated volumes and pass-by volumes, respectively.

Table 14: Trip Assignment

To/From	Via
North	5% Vanier Parkway (N) 5% Lola Street (N) 15% St. Laurent Boulevard (N)
South	5% Belfast Road (S) 5% Riverside Drive (S) 10% St. Laurent Boulevard (S)
East	15% to/from Highway 417/174 (E) 10% Ogilvie Road (E)
West	25% to/from Highway 417 (W) 5% Vanier Parkway (N)
Total	**100%**

Figure 18: New Site-Generated Auto Volumes

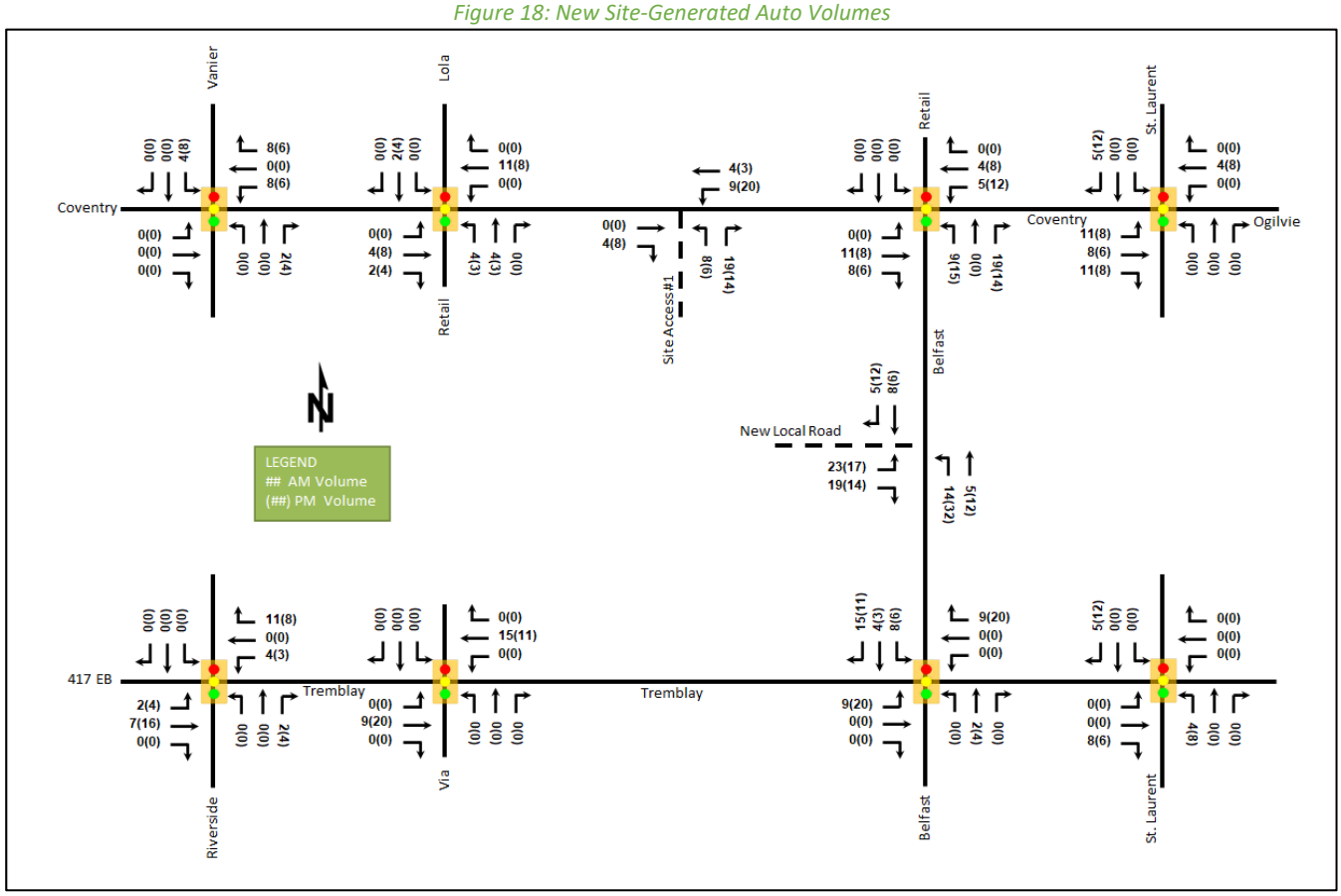
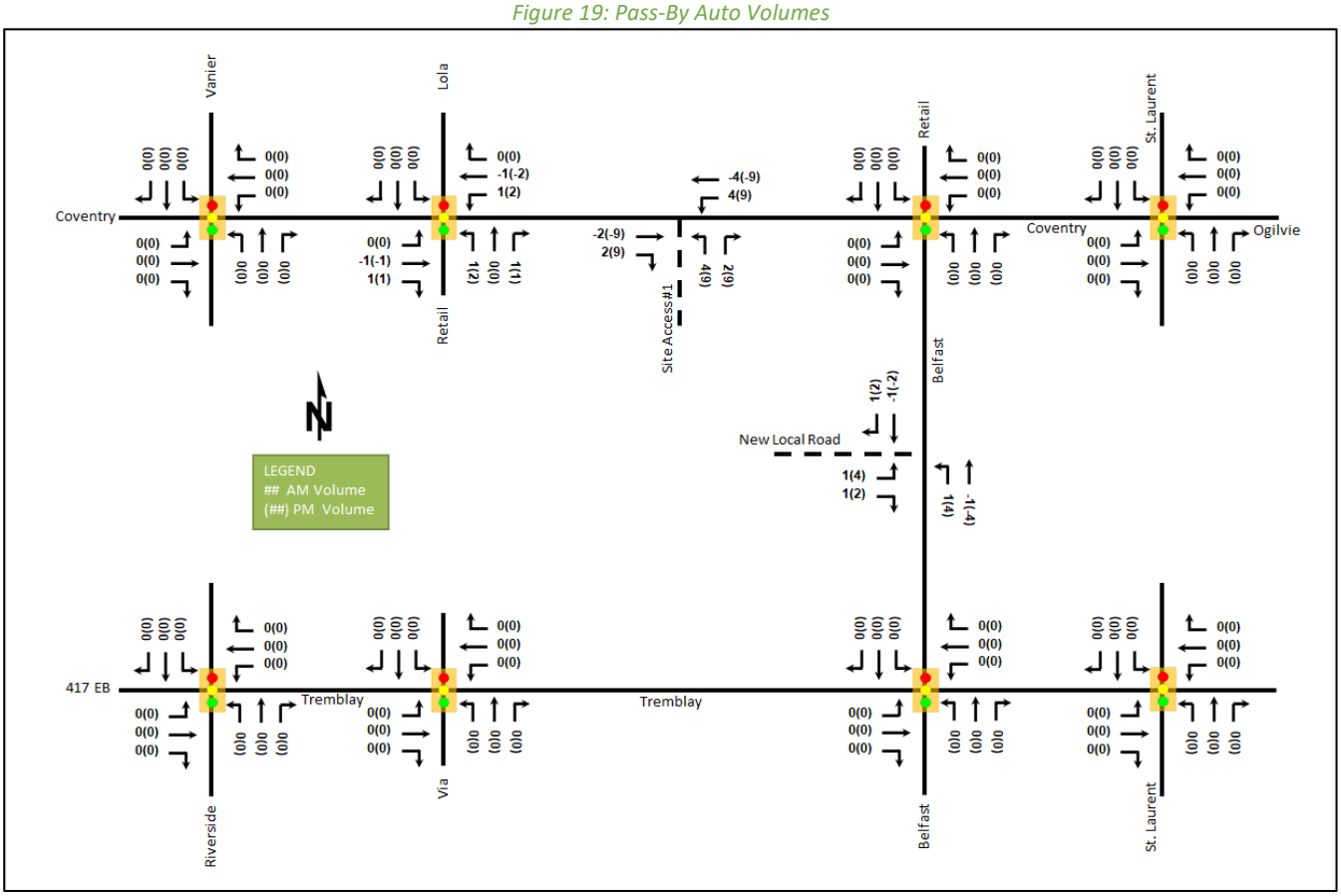


Figure 19: Pass-By Auto Volumes



6 Background Network Travel Demands

6.1 Transportation Network Plans

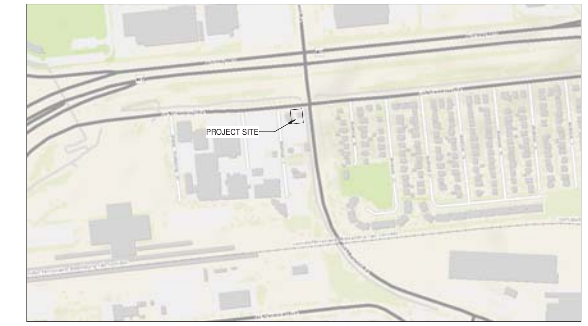
The transportation network plans were discussed in Section 2.3. A MUP has recently been completed on the west side of Belfast Road. The widening of Coventry Road and Belfast Road are assumed to be beyond 2037, and none of the proposed changes within the study horizons are considered to have any notable impact on the study area traffic volumes and travel patterns.

6.2 Background Growth

A review of the background projections from the City's TRANS Regional Model for the 2011 and 2031 horizons was completed to determine the background growth for each of the study area roadways. The background TRANS model growth rates are summarized in Table 15 and the TRANS model plots are provided in Appendix E.

Table 15: TRANS Regional Model Projections – Study Area Growth Rates

Street	TRANS Rate		2011 to Existing		Existing to 2031	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
Coventry	2.79%	1.95%	4.24%	7.80%	1.62%	-2.60%
Tremblay	2.71%	1.32%	0.46%	3.32%	4.58%	-1.05%
Hwy 417 Ramp	1.41%	0.70%	2.18%	-	0.79%	-

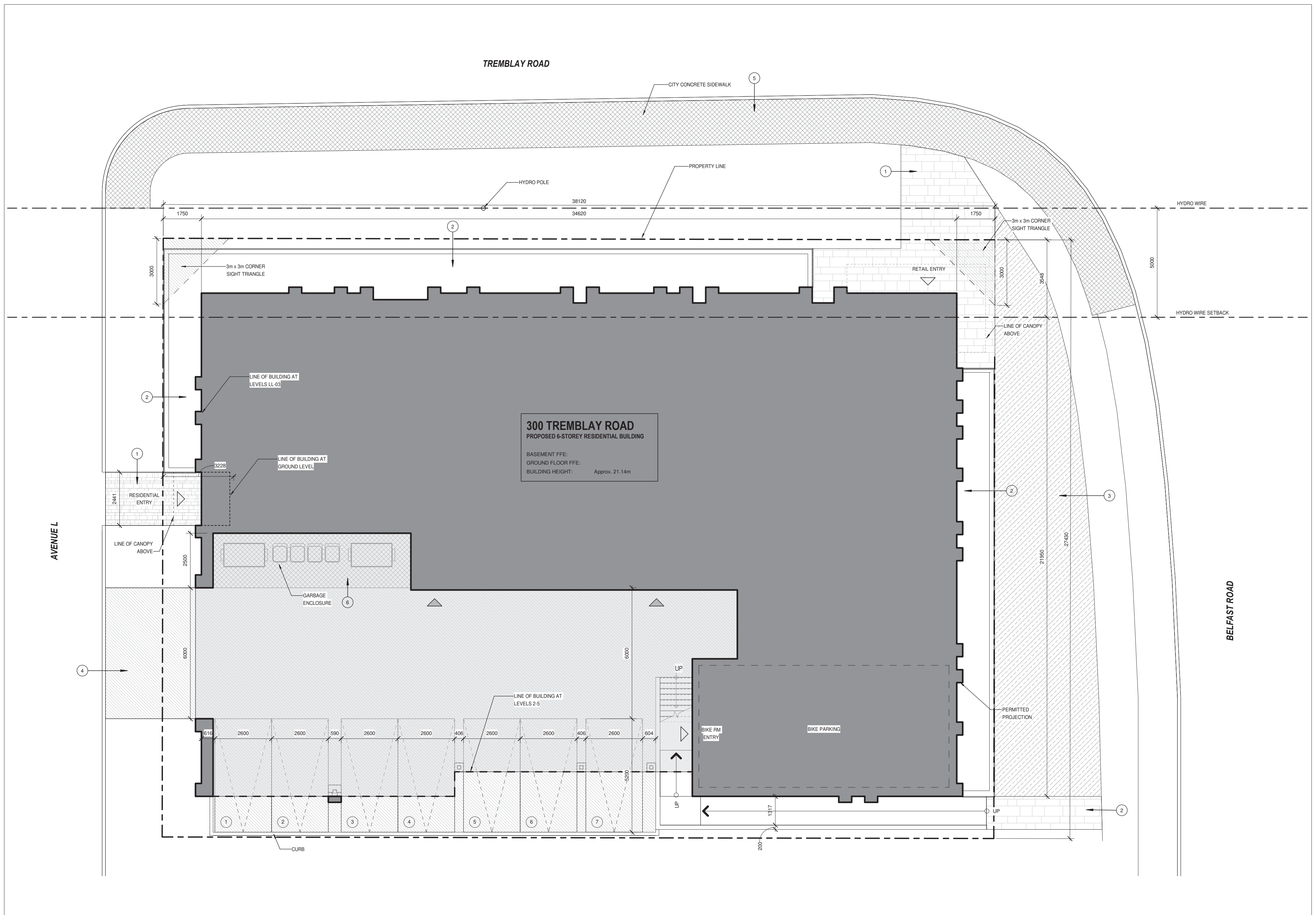


4 SP-01 **LOCATION PLAN**
SCALE: 1 : 1

GENERAL ARCHITECTURAL NOTES:

1. This drawing is the property of the Architect and may not be reproduced or used without the expressed consent of the Architect.
2. Drawings are not to be scaled. The Contractor is responsible for checking and verifying all levels and dimensions and shall report all discrepancies to the Architect and obtain clarification prior to commencing work.
3. Upon notice in writing, the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents.
4. The Architectural drawings are to be read in conjuction with all other Contract Documents including Project Manuals and the Structural, Mechanical and Electrical Drawings.
5. Positions of exposed or finished Mechanical or Electrical devices, fittings and fixtures are indicated on the Architectural Drawings. Locations shown on the Architectural Drawings shall govern over Mechanical and Electrical Drawings. Mechanical and Electrical items not clearly located will be located as directed by the Architect.
6. These documents are not to be used for construction unless specifically noted for such purpose.

PRINTED: YYYY-MM-DD



1 SP-01 **SITE PLAN**
SCALE: 1 : 100

SITE & PROJECT STATISTICS

STATISTICS AND ZONING INFORMATION

ZONING DESIGNATION: TD1

Dwelling Units: 73

BICYCLE PARKING CALCULATION
As per Table 111A

Required Parking: 37 spaces
0.5sp/dwelling unit [111A(b)(i)]

Total Parking Provided: 38 spaces

PARKING CALCULATION
As per Section 101 & Section 102

Parking Space Rate Area: Area X

NEW BUILDING
Residential Units: 73 units
Required Parking: 0 spaces
Parking Provided: 0 spaces

Visitor Parking:
Required Parking: 6 spaces
0.1 spaces/unit beyond 12 units
Parking Provided: 7 spaces

Total Required Parking:6 spaces
Total Parking Provided:7 spaces

AMENITY AREA CALCULATION
As per Table 137

Total Amenity Area Req'd: 438m²
6m²/ unit

Communal Area Required: 219m²
Communal Area Provided: 330m²

Private Amenity Provided: 0m²

Total Amenity Area Provided:330m²

2 SP-01 **ZONING**
SCALE: 1 : 1

SITE PLAN SYMBOLS LEGEND

- BUILDING ENTRANCE
- BUILDING EXIT
- FIRE HYDRANT
- NEW STREET LIGHT
- STREET LIGHT TO BE REMOVED
- BICYCLE PARKING

SYMBOLS LEGEND
SCALE: NTS

1. INTERLOCKED CONCRETE PAVERS
2. WINDOW WELL
3. SOFT LANDSCAPING
4. ASHPALT
5. CITY CONCRETE SIDEWALK
6. CONCRETE PAD

SP-01 **KEYNOTE LEGEND**
SCALE: N.T.S.

ISSUE RECORD

project1 studio

Project1 Studio Incorporated
| 613.884.3939 | mail@project1studio.ca

300 TREMBLAY

300 Tremblay Road
Ottawa, ON

PROJ	SCALE	DRAWN	REVIEWED
2008	As indicated	IB	RMK

SITE PLAN

SP-01

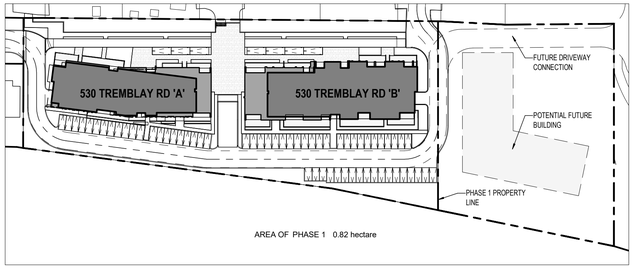
Figure 2: Proposed Site Plan

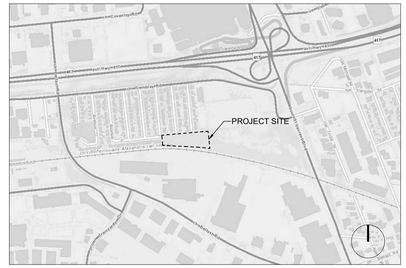
Site & Project Statistics	
Zoning By-Law	TD1 (Transit Oriented Development Zone)
Lot Width:	60m
Lot Area:	1.27 hectares
Lot Area Under this Application	0.82 hectares
Number of Dwelling Units:	124 units 54 - Building 'A' 70 - Building 'B'

Zoning Mechanism	Requirement	Proposed
Min. Front Yard Setback	3m	15m
Min. Interior Side Yard	3m	10m - West & 7.2m - East
Min. Rear Yard Setback	No Minimum	15m
Max. Building Height	20m *In excess of 15m from a property line abutting an R1, R2, or R3 Zone*	16.54m - Building 'A' 19.52m - Building 'B'
Minimum Separation distance between buildings	3m *Higher than 14.5m*	11.9m

Ground Floor Amenity Area		163.96m2 *2% of the total lot area must be provided as outdoor communal space located at grade anywhere on the lot and such area can also be used towards complying with any amenity area requirements*	1091.7m2
Minimum Density		123 units *150 units / hectare*	124 units
Vehicle Parking	Resident Parking	0	124 spaces *66 - Below Grade*
	Visitor Parking	12 spaces *0.1 per dwelling unit (no visitor parking spaces required for the first 12 dwelling units). Maximum requirement per building: 30 spaces*	12 spaces
	Total Parking	12 spaces	136 spaces
Bicycle Parking		Building 'A' 27 spaces Building 'B' 35 spaces *0.5 per dwelling unit* Total required: 62	67 spaces

Amenity Area	Total Amenity Area Building 'A'	324m2 *6m2 per dwelling unit*	1283.17m2
	Communal Amenity Building 'A'	162m2 *A minimum of 50% of the required total amenity area*	852.39m2 545.9m2 - at Grade Area 153.44m2 - Interior Amenity 153.05m2 - Roof Top Amenity
	Total Amenity Area Building 'B'	420m2 *6m2 per dwelling unit*	1626.95m2
	Communal Amenity Building 'B'	162m2 *A minimum of 50% of the required total amenity area*	851.3m2 545.9m2 - at Grade Area 165.7m2 - Interior Amenity 139.7m2 - Roof Top Amenity





ZONING INFORMATION
SCALE: N.T.S.

CONTEXT PLAN
3 / SP-01
SCALE: 1 : 1000

LOCATION PLAN
SCALE: N.T.S.

SURVEY INFO
SCALE: NTS

TOPOGRAPHIC PLAN OF SURVEY OF
PART OF LOTS 4, 5 & 6
BLOCK 1
REGISTERED PLAN 29
FORMERLY CITY OF VANIER
CITY OF OTTAWA

FAIRHILL, MOFFATT & WOODLAND LTD. 2018

Scale 1:250
12 9 6 3 0 6 12 Meters

SITE PLAN SYMBOLS LEGEND

- BUILDING ENTRANCE
- BUILDING EXIT
- FIRE HYDRANT
- NEW STREET LIGHT
- STREET LIGHT TO BE REMOVED
- BICYCLE PARKING
- SIAMESE CONNECTION

SYMBOLS LEGEND
SCALE: NTS

1. CONCRETE MULTI-USE PATHWAY
2. INTERLOCKED CONCRETE PAVERS
3. SOFT LANDSCAPING
4. COLLAPSIBLE BOLLARDS
5. TINTED CONCRETE
6. CONCRETE SIDEWALK
7. ASPHALT PAVING

KEYNOTE LEGEND
SCALE: N.T.S.

SITE PLAN
1 / SP-01
SCALE: 1 : 250

GENERAL ARCHITECTURAL NOTES:
1. This drawing is the property of the Architect and may not be reproduced or used without the expressed consent of the Architect.
2. Drawings are not to be scaled. The Contractor is responsible for checking and verifying all levels and dimensions and shall report all discrepancies to the Architect and obtain clarification prior to commencing work.
3. Upon notice in writing, the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents.
4. The Architectural drawings are to be read in conjuction with all other Contract Documents including Project Manuals and the Structural, Mechanical and Electrical Drawings.
5. Positions of exposed or finished Mechanical or Electrical devices, fittings and fixtures are indicated on the Architectural Drawings. Locations shown on the Architectural Drawings shall govern over Mechanical and Electrical Drawings. Mechanical and Electrical items not clearly located will be located as directed by the Architect.
6. These documents are not to be used for construction unless specifically noted for such purpose.

CLV GROUP DEVELOPMENTS

2019-10-25

2	ISSUED FOR SITE PLAN CONTROL	19-10-25
1	ISSUED FOR COORDINATION	19-08-30

ISSUE RECORD

ONTARIO ASSOCIATION of ARCHITECTS
RYAN M. MOCKRYNE
LICENCE
7370

project1 studio
Project1 Studio Incorporated
|613.884.3939 | mail@project1studio.ca

530 TREMBLAY
BUILDINGS 'A' & 'B'

530 Tremblay road
Ottawa, ON

PROJ	SCALE	DRAWN	REVIEWED
1906	NOTED	JDL	RMK

SITE PLAN

SP-01

Figure 18: New Site Generation Auto Volumes Scenario 1

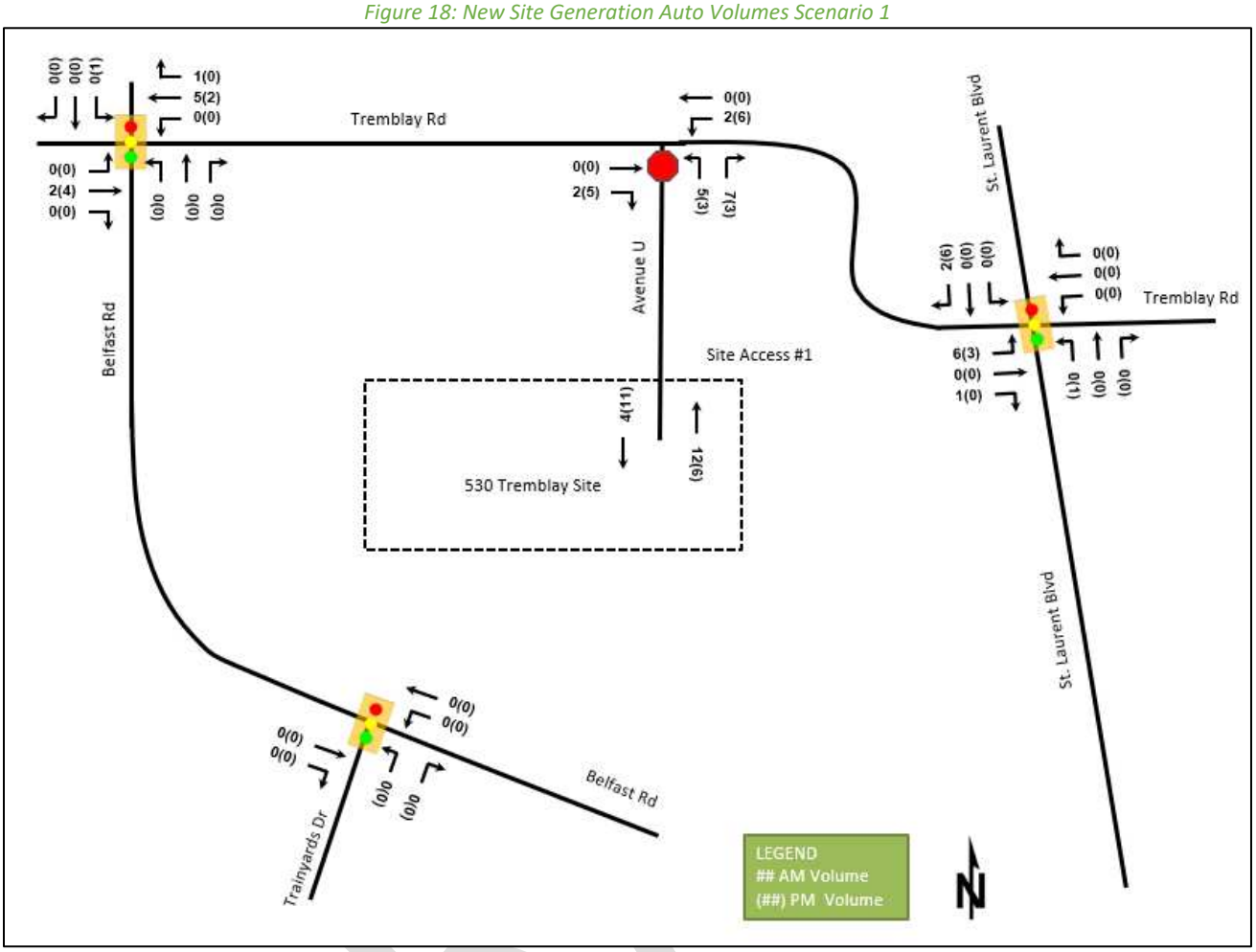
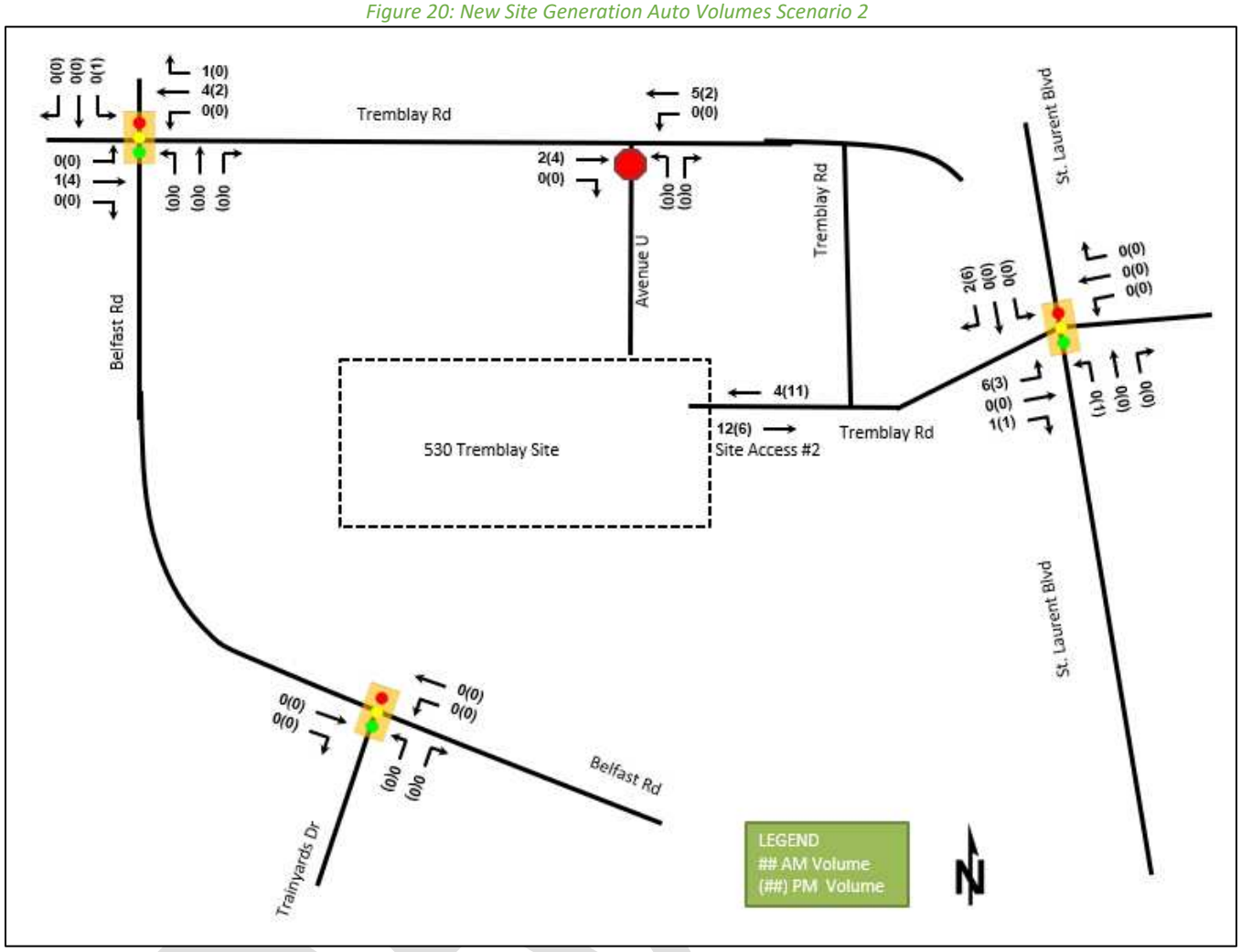


Figure 20: New Site Generation Auto Volumes Scenario 2



6 Background Network Travel Demands

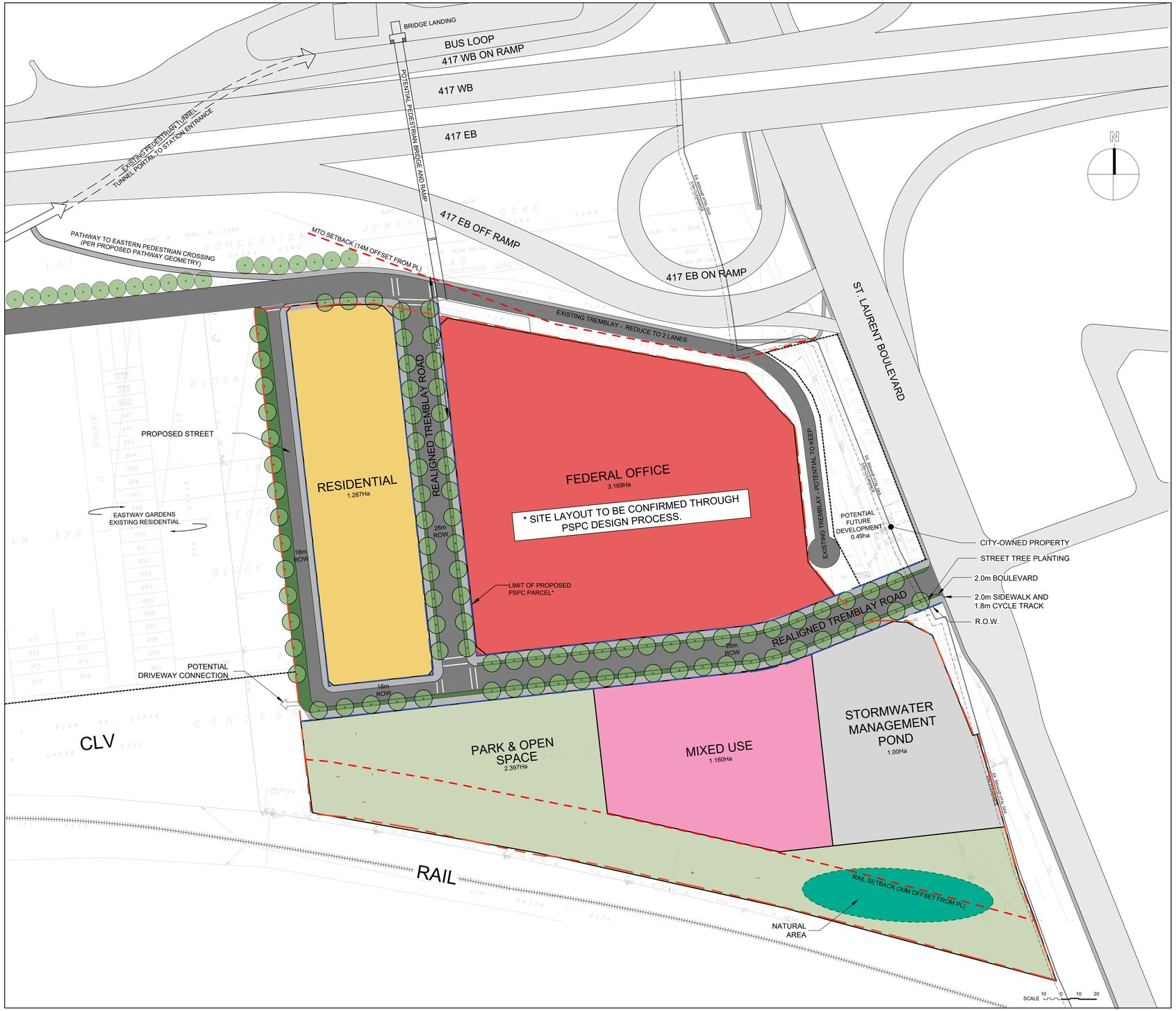
6.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3.1. The opening of the St. Laurent LRT station and TOD policies have been accounted for within the modal share assumptions. As part of Phase 3 (2026-2031) of the 2031 Affordable Network, a segment of Tremblay Road between Belfast Road and St. Laurent Boulevard, will be widened and realigned.

A multi-use pathway along Belfast Road between Trainyards Drive and Coventry Road will be completed as part of Phase 2 (2020-2025) of the 2031 Affordable Network. The additional connectivity provided by this will improve the active mode network but is not anticipated to significantly impact the modal shares used in the future trip generation.

6.2 Background Growth and Other Developments

Adjacent area transportation studies have used a 1% traffic growth. This growth rate was justified through historic traffic counts. As such, an annual background growth rate of 1% will be used (excluding Avenue U as growth is not expected there) in order to remain consistent with these studies.



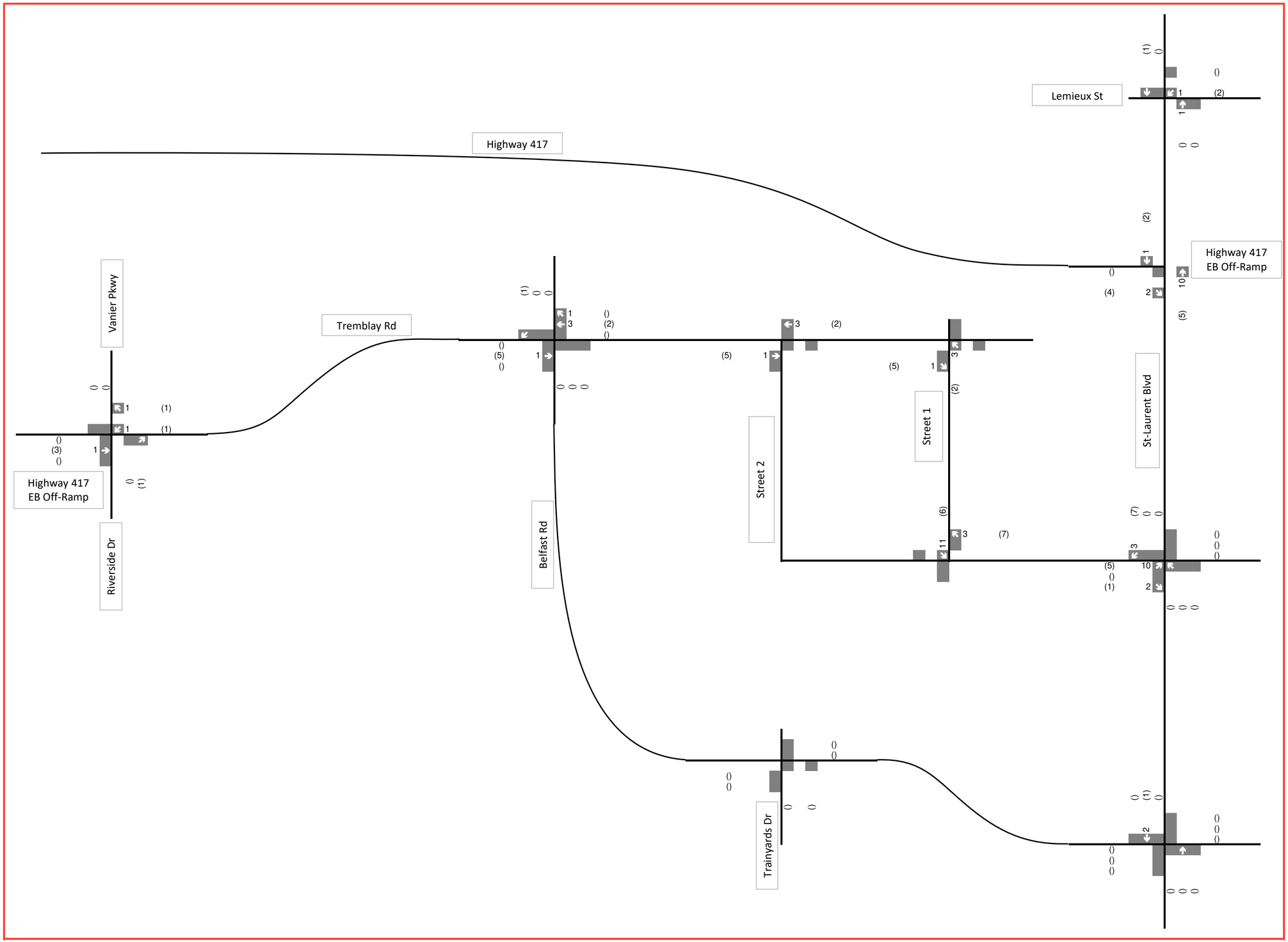
LEGEND:

- MIXED USED (MID-RISE TO HIGH-RISE RESIDENTIAL / RETAIL / HOTEL)
- RESIDENTIAL (LOW-RISE TO MID-RISE)
- FEDERAL OFFICE
- PARK AND OPEN SPACE
- STORMWATER MANAGEMENT POND
- PROPERTY LIMIT / BOUNDARY
- RIGHT-OF-WAY
- SETBACK

DEVELOPMENT CONCEPT PLAN

NOVEMBER 26, 2019

wsp

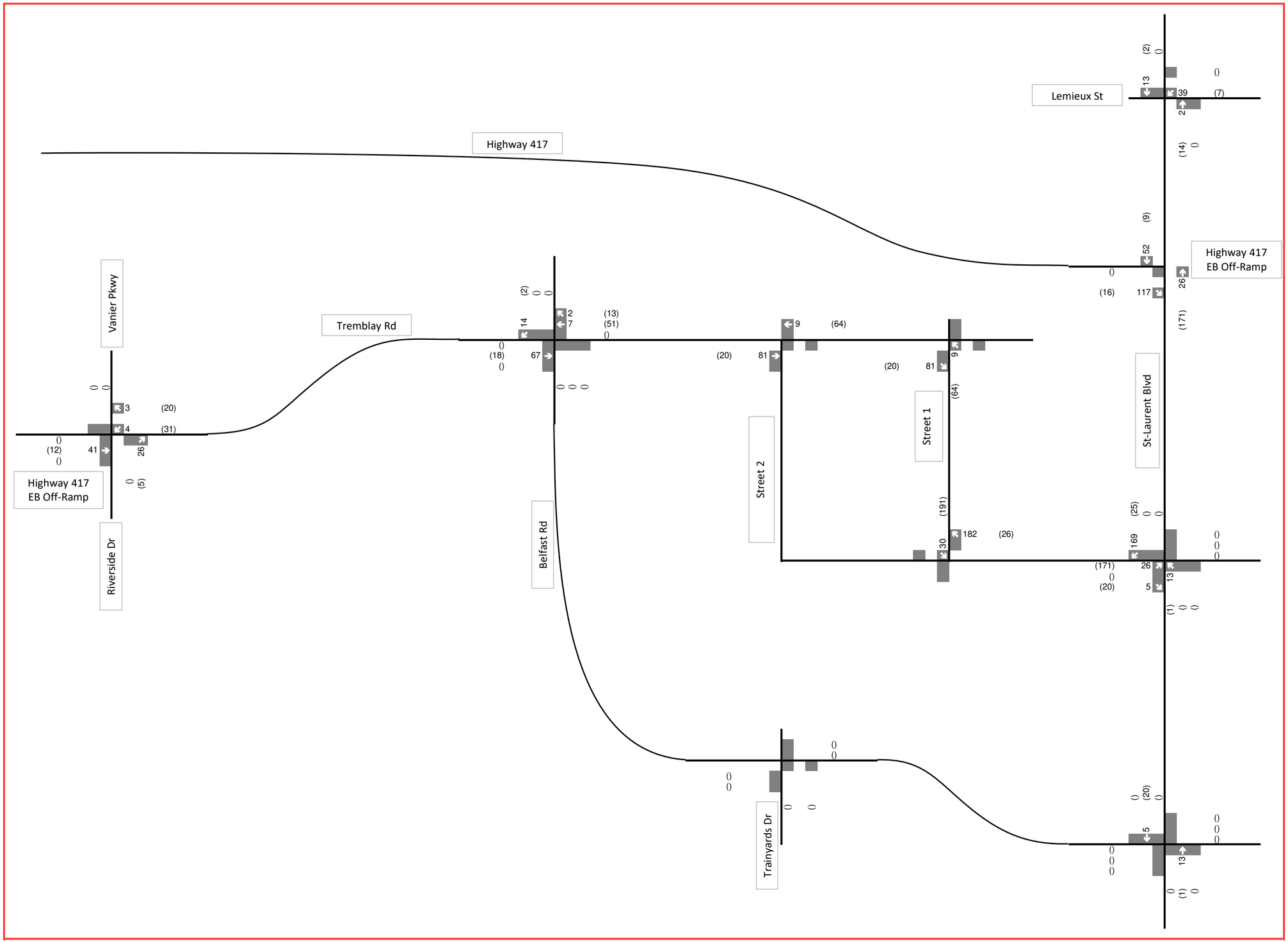


Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-2
2025 Residential
Trips Generated

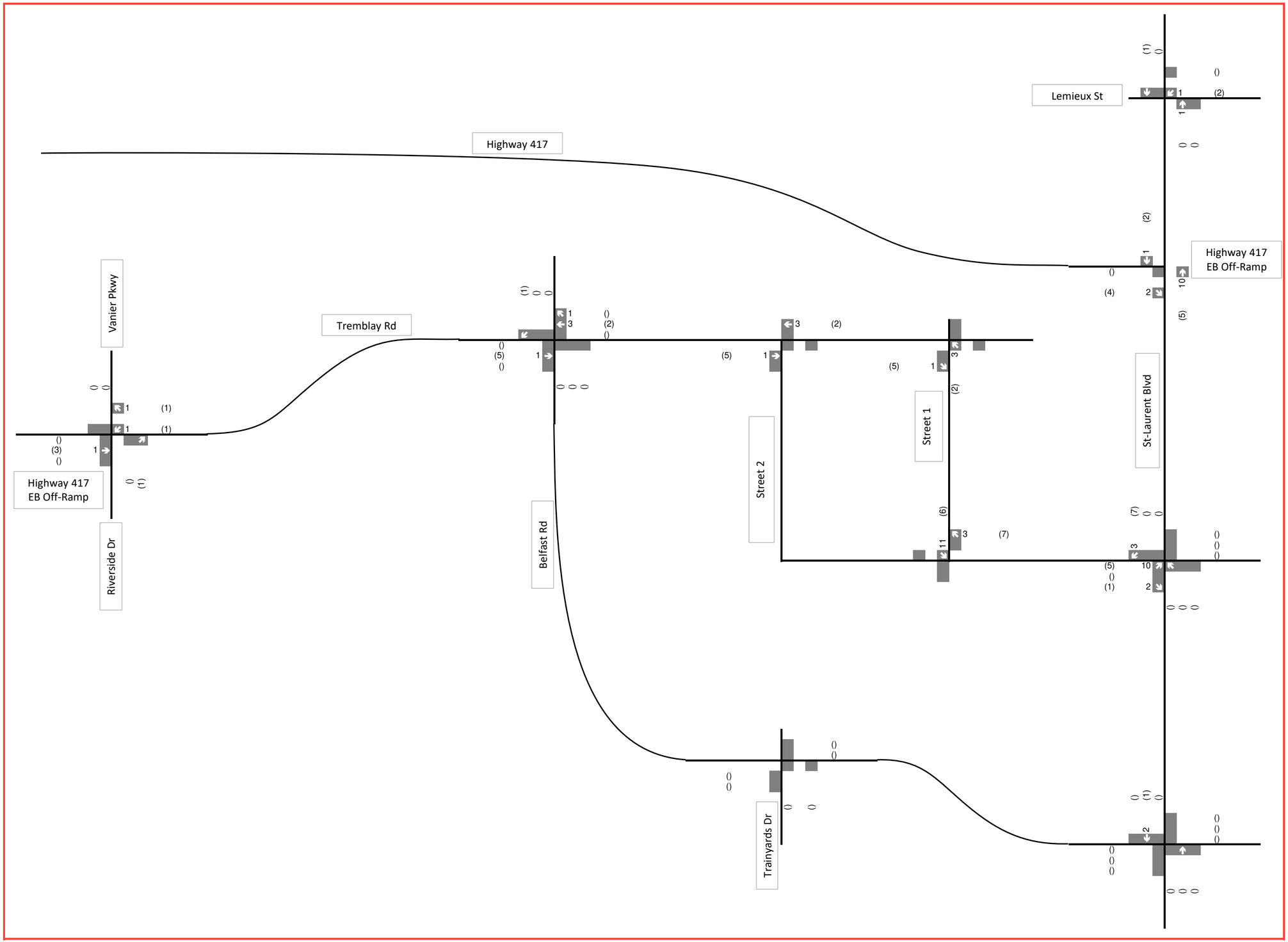


Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-3
2025 Office Trips Generated

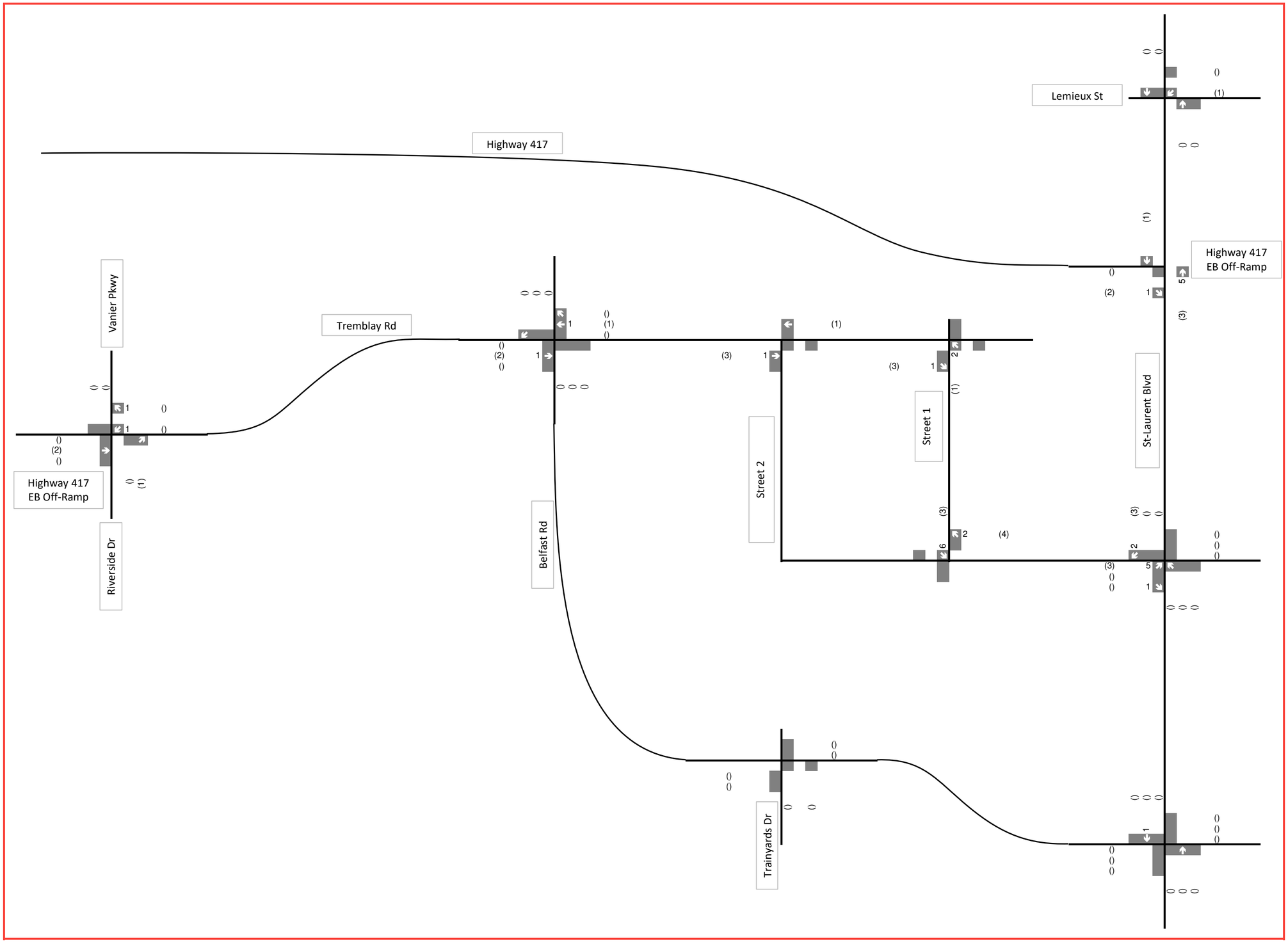


Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-4
2029 Residential Trip Generation



Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-5
2033 Residential
Trips Generated

APPENDIX H

Transportation Demand Management Checklists

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)*	☐
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	☐
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	☐

APPENDIX I

MMLOS Review

Segment MMLOS Analysis

This section provides a review of the boundary streets Pickering Place and Bannermount Avenue using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015 and the 2017 MMLOS Addendum, were used to evaluate the levels of service for each alternative mode of transportation, based on the targets for areas within 'Mixed Use Centre'.

Exhibit 4 of the *MMLOS Guidelines* has been used to evaluate the segment pedestrian level of service (PLOS) of Pickering Place and Bannermount Avenue. Exhibit 22 suggests a target PLOS C for all roadways within Mixed Use Centre areas. The results of the segment PLOS analysis are summarized in **Table 1**.

Exhibit 11 of the *MMLOS Guidelines* has been used to evaluate the segment bicycle level of service (BLOS) of Pickering Place and Bannermount Avenue. Within Mixed Use Centre areas, Exhibit 22 suggests a target BLOS D for local roadways with no cycling designation. The results of the segment BLOS analysis are summarized in **Table 2**.

Exhibit 15 of the *MMLOS Guidelines* has been used to evaluate the segment transit level of service (TLOS) of Pickering Place and Bannermount Avenue. Within Mixed Use Centre areas, Exhibit 22 does not identify a target TLOS for roadways that are not in the City's Transit Priority Network.

Exhibit 20 of the *MMLOS Guidelines* has been used to evaluate the segment truck level of service (TkLOS) of Pickering Place and Bannermount Avenue. Within Mixed Use Centre areas, Exhibit 22 does not identify a target TkLOS for local roadways with no truck route designation. The results of the segment TkLOS analysis are summarized in **Table 3**.

Table 1: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On-Street Parking	Operating Speed[1]	PLOS
Pickering Place (east side, Tremblay Road to Southern End)					
N/A	N/A	< 3,000 vpd	No	60 km/h	**F**
Pickering Place (west side, Tremblay Road to Southern End)					
1.8m	0m	< 3,000 vpd	No	60 km/h	C
Bannermount Avenue (north side, Pickering Place to Avenue K)					
2.0m	2.0m	< 3,000 vpd	Yes	50 km/h	A
Bannermount Avenue (south side, Pickering Place to Avenue K)					
2.0m	2.0m	< 3,000 vpd	Yes	50 km/h	A

1. Operating speed taken as the speed limit plus 10 km/h.

Table 2: BLOS Segment Analysis

Road Class	Type of Route	Type of Bikeway	Travel Lanes	Operating Speed	BLOS
Pickering Place (Tremblay Road to Southern End)					
Local	N/A	Mixed Traffic	2	60 km/h	**F**
Bannermount Avenue (Pickering Place to Avenue K)					
Local	N/A	Mixed Traffic	2	50 km/h	D

Table 3: TkLOS Segment Analysis

Curb Lane Width	Number of Travel Lanes Per Direction	TkLOS
Pickering Place (both sides, Tremblay Road to Southern End)		
> 3.7m	1	B
Bannermount Avenue (Pickering Place to Avenue K)		
< 3.2m	1	E