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Proposed Residential Development 1950 Scott Street and 312-314 Clifton Road Transportation Impact Assessment

**Proposed Residential Development
1950 Scott Street and 312-314 Clifton Road
Transportation Impact Assessment**

Prepared By:

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July 2024

Novatech File: 121301
Ref: R-2021-156

July 31, 2024

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

Attention: Mr. Wally Dubyk
Project Manager, Infrastructure Approvals

Dear Mr. Dubyk:

Reference: 1950 Scott Street and 312-314 Clifton Road
Transportation Impact Assessment
Novatech File No. 121301

We are pleased to submit the following Transportation Impact Assessment (TIA), in support of a Site Plan Control application at 1950 Scott Street and 312-314 Clifton Road, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa's *Revised Transportation Impact Assessment Guidelines* (June 2023).

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

Yours truly,

NOVATECH



Joshua Audia, P.Eng.
Project Engineer | Transportation



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

TIA Plan Reports

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

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

Certification

- I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines (Update Effective July 2023);
- I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
- I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and

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Transportation Engineering Services
Planning, Real Estate and Economic Development
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Revision Date: June, 2023

Transportation Impact Assessment Guidelines

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

is either transportation engineering

or transportation planning.

Dated at this day of , 20.

(City)

Name:

Professional Title:

B. Byvelds

Signature of Individual certifier that they meet the above four criteria

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Stamp



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

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EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of a Site Plan Control application for the property located at 1950 Scott Street and 312-314 Clifton Road. The subject site has most recently been occupied by the International Buddhist Progress Society of Ottawa and its surface parking, and is surrounded by the following:

- Scott Street and the future extension of the Confederation Line LRT to the north;
- Residential development and mixed use development to the south;
- Clifton Road and residential development to the east; and
- Existing mixed-use development and McRae Avenue to the west.

The subject site is designated as 'Corridor – Mainstreet' (Scott Street) in Schedule B2 of the City of Ottawa's Official Plan and zoned as 'Traditional Mainstreet' (TM[2581] S400-h).

The proposed development consists of one 22-storey residential tower with a total of 244 dwellings and approximately 2,098 ft² of ground-floor commercial space. Based on the preliminary site plan, the development will include an underground parking garage with a total of 87 parking spaces and access via one full-movement driveway to Clifton Road. The proposed development will be completed in one phase, and is anticipated to be fully occupied in 2026.

The study area for this report includes the boundary roadways Scott Street and Clifton Road, as well as the following intersections:

- Scott Street/Clifton Road;
- Scott Street/Lanark Avenue/West Village Private.

The selected time periods for this TIA are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The buildout year 2026 and horizon year 2031 will be considered.

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

Forecasting

- The proposed development is projected to generate a total of 119 person trips (including 18 vehicle trips) during the AM peak hour, and 137 person trips (including 24 vehicle trips) during the PM peak hour.

Access Design

- Access to the proposed underground parking garage will be provided via one full-movement driveway to Clifton Road. The design of the proposed access meets most relevant provisions of the City's *Private Approach By-Law* (PABL) and *Zoning By-Law* (ZBL), and the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*.

- Section 25(1)(p) of the PABL identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. This requirement is not met by the proposed garage access to Clifton Road, which is 2.2m from the southern property line. TAC's *Geometric Design Guide* identifies a recommended minimum spacing of 1m between curb returns of adjacent residential driveways to local and collector roadways. The adjacent approved development at 316-332 Clifton Road proposes a driveway at the shared property line with the subject site, however both developments are not anticipated to generate high volumes of traffic, and conflicts between the two driveways are anticipated to be minimal.
- Section 25(1)(u) of the PABL identifies a requirement that any private approach serving a parking area with more than 50 parking spaces shall not have a grade exceeding 2% for the first 9m inside the property line. A waiver of this requirement is requested. The proposed maximum grade of the garage ramp is approximately 3.3% from the sidewalk to the garage door (i.e. for a distance of approximately 7.5m). This grade is not anticipated to obscure drivers' vision of pedestrians crossing the proposed access, as an entire vehicle can be located outside of the proposed building before crossing the sidewalk on Clifton Road.

Development Design and Parking

- Sidewalks will be maintained along the subject site's frontages to Scott Street and Clifton Road, and internal walkways will be provided around the perimeter of the building to provide connectivity from all building entrances to these sidewalks.
- A total of 252 bicycle parking spaces will be provided on-site, with 15 exterior spaces, 30 spaces in a bike room on the ground floor, and 207 spaces within the underground parking garage. This equates to 1.03 bicycle spaces per unit, which meets the minimum requirement of 1.0 bicycle spaces per unit. It should be noted that this requirement was established during the Zoning By-Law Amendment application stage, and is more than twice the typical bicycle parking rate of 0.5 bicycle spaces per unit.
- The proposed parking supply is 32 spaces short of the minimum requirement. Providing limited parking near transit stations act as a strong incentive for residents, visitors, and patrons of the proposed development to travel to/from the site via transit or active modes.
- OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. Main entrances to both proposed buildings are anticipated to be within 400m walking distance of Westboro Station and bus stops on Scott Street, McRae Avenue, or Richmond Road.
- All required Transportation Demand Management (TDM)-supportive design and infrastructure measures in the checklist will be met.
- The garbage room will be located within the underground parking garage, and garbage bins will be wheeled up to the curb, to be collected curbside on Clifton Road. There is no proposed on-site fire route for the development, as the main entrance fronts onto Scott Street.

- A residential loading zone for move-ins is proposed to be located curbside on Clifton Road, between Scott Street and the existing bulbouts on Clifton Road. To accommodate this loading zone, it is proposed that the existing parking restrictions on the west side of Clifton Road be adjusted to allow for short-term parking year-round, north of the existing bulbouts. It is also proposed that the existing one-hour parking provision on the east side of Clifton Road be terminated north of the existing bulbouts. This is anticipated to have no impact on parking due to the existing access to 305 Clifton Road. The proposed residential loading zone location is along the wider section of Clifton Road, and further from the underground parking garage ramp, which provides improve sightlines for drivers exiting the ramp as they look toward Scott Street.
- The existing bulbout on Scott Street that is straddling the subject site and the neighbouring property at 1960 Scott currently introduces a transit-exclusive lane. Once the Confederation Line LRT is open and the Scott Street bus detour is decommissioned, a second bulbout at the northwest corner of Scott Street/Clifton Road is planned to be implemented, and the two bulbouts will delineate a parking lay-by along the subject site's frontage to Scott Street. It is proposed that signage to include a commercial loading space for the ground-floor units be included within this proposed lay-by on Scott Street.

Boundary Streets

- The results of the segment MMLOS analysis can be summarized as follows:
 - Neither boundary street meets the target pedestrian level of service (PLOS) A;
 - Both boundary streets meet the target bicycle level of service (BLOS) A or D;
 - Scott Street does not meet the target transit level of service (TLOS) A;
 - Scott Street meets the target truck level of service (TkLOS) D.
- The existing pedestrian facilities on Scott Street achieve the best-possible PLOS, and therefore no recommendations are identified. The east side of Clifton Road does not include a sidewalk, and the target PLOS A can be achieved by constructing a sidewalk with a minimum width of 1.8m. This is identified for the City's consideration.
- Once Stage 2 of the Confederation Line LRT is complete, the bus detour will not need to run along Scott Street, and light rail transit will be provided immediately north of the roadway. Therefore, the target TLOS will be met.

Transportation Demand Management

- A review of the City's *TDM Measures Checklist* has been conducted by the proponent, and will provide the following TDM measures:
 - Display local area maps with walking/cycling access routes and key destinations at major entrances;
 - Display relevant transit schedules and route maps at entrances;
 - Unbundle parking cost from monthly rent;
 - Provide a multi-modal travel information package to new residents or employees.
- The proposed development is recommended from a transportation perspective.

1.0 SCREENING

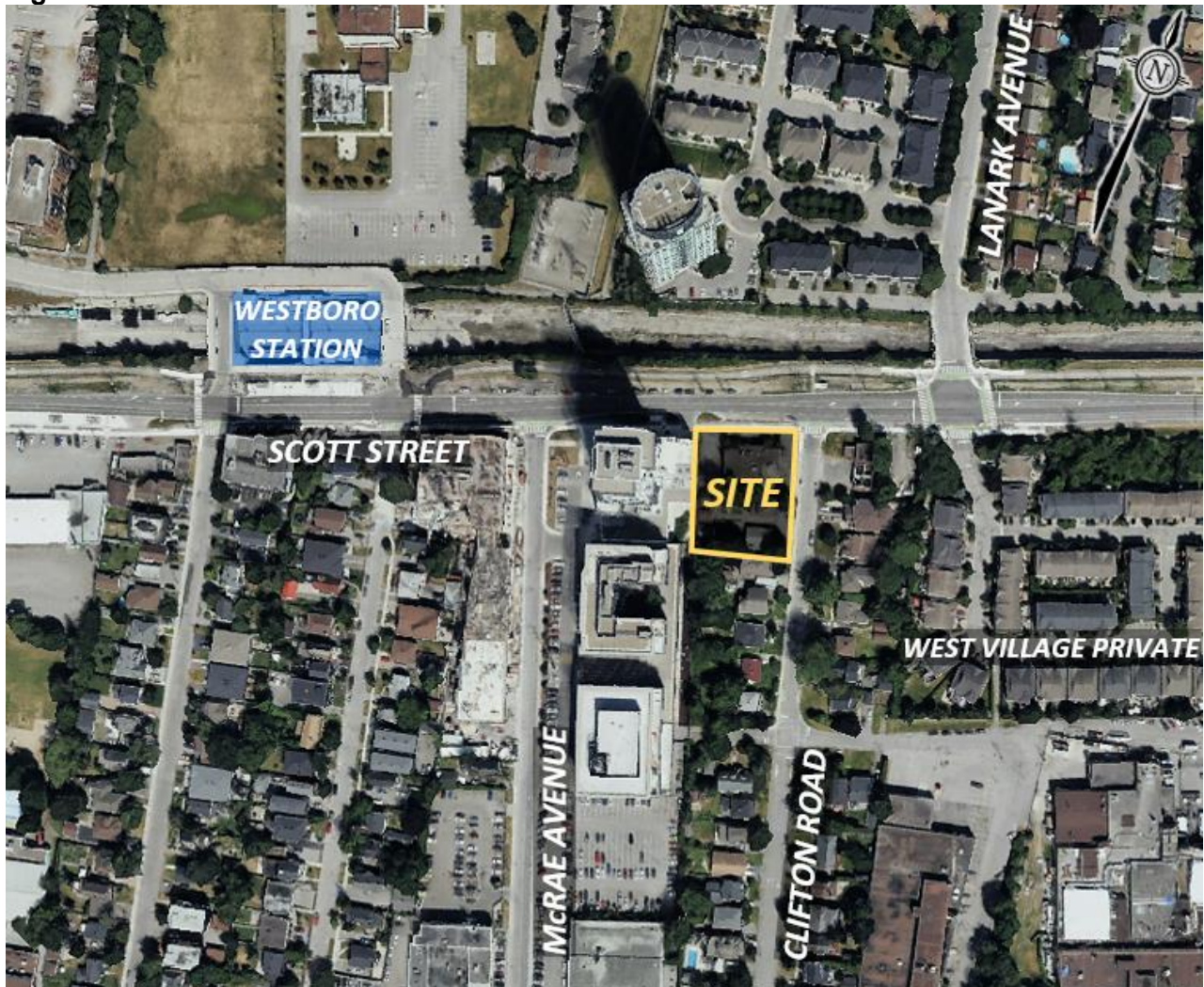
1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared in support of a Site Plan Control application for the property located at 1950 Scott Street and 312-314 Clifton Road. The subject site has most recently been occupied by the International Buddhist Progress Society of Ottawa and its surface parking, and is surrounded by the following:

- Scott Street and the future extension of the Confederation Line LRT to the north;
- Residential development and mixed use development to the south;
- Clifton Road and residential development to the east; and
- Existing mixed-use development and McRae Avenue to the west.

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

Figure 1: Site Location



1.2 Proposed Development

The subject site is designated as 'Corridor – Mainstreet' (Scott Street) in Schedule B2 of the City of Ottawa's Official Plan and zoned as 'Traditional Mainstreet' (TM[2581] S400-h).

The proposed development consists of one 22-storey residential tower with a total of 244 dwellings and approximately 2,098 ft² of ground-floor commercial space. Based on the site plan, the development will include an underground parking garage with a total of 87 parking spaces and access via one full-movement driveway to Clifton Road. The proposed development will be completed in one phase, and is anticipated to be fully occupied in 2026.

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

1.3 Screening Form

The City's *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 anticipated to generate over 60 peak hour person trips; further assessment **is required** based on this trigger.
- Location Triggers – The development site is located within a Mainstreet – Corridor Design Priority Area; further assessment **is required** based on this trigger.
- Safety Triggers – None of the Safety Triggers are met; further assessment **is not required** based on this trigger.

2.0 SCOPING

2.1 Existing Conditions

2.1.1 Roadways

Scott Street falls under the jurisdiction of the City of Ottawa, and is classified as an arterial roadway east of Churchill Avenue, and a local roadway west of Churchill Avenue. It runs on an east-west alignment from Bayview Station Road/Albert Street to Churchill Avenue. Transit vehicles are able to travel on a temporary detour route west of Churchill Avenue, which connects to Kichi Sibi Mikan (formerly the Sir John A. Macdonald Parkway). Within the study area, Scott Street has a two-lane undivided urban cross-section, with sidewalks and cycle tracks on both sides. On-street parking is permitted on the north side of Scott Street between Clifton Road and Tweedsmuir Avenue. Scott Street has a posted speed limit of 50km/h. East of Churchill Avenue, it is also designated as a truck route, permitting full loads. The Official Plan reserves a 26m right-of-way (ROW) for Scott Street; a widening has been taken along the property frontage as part of a previous application.

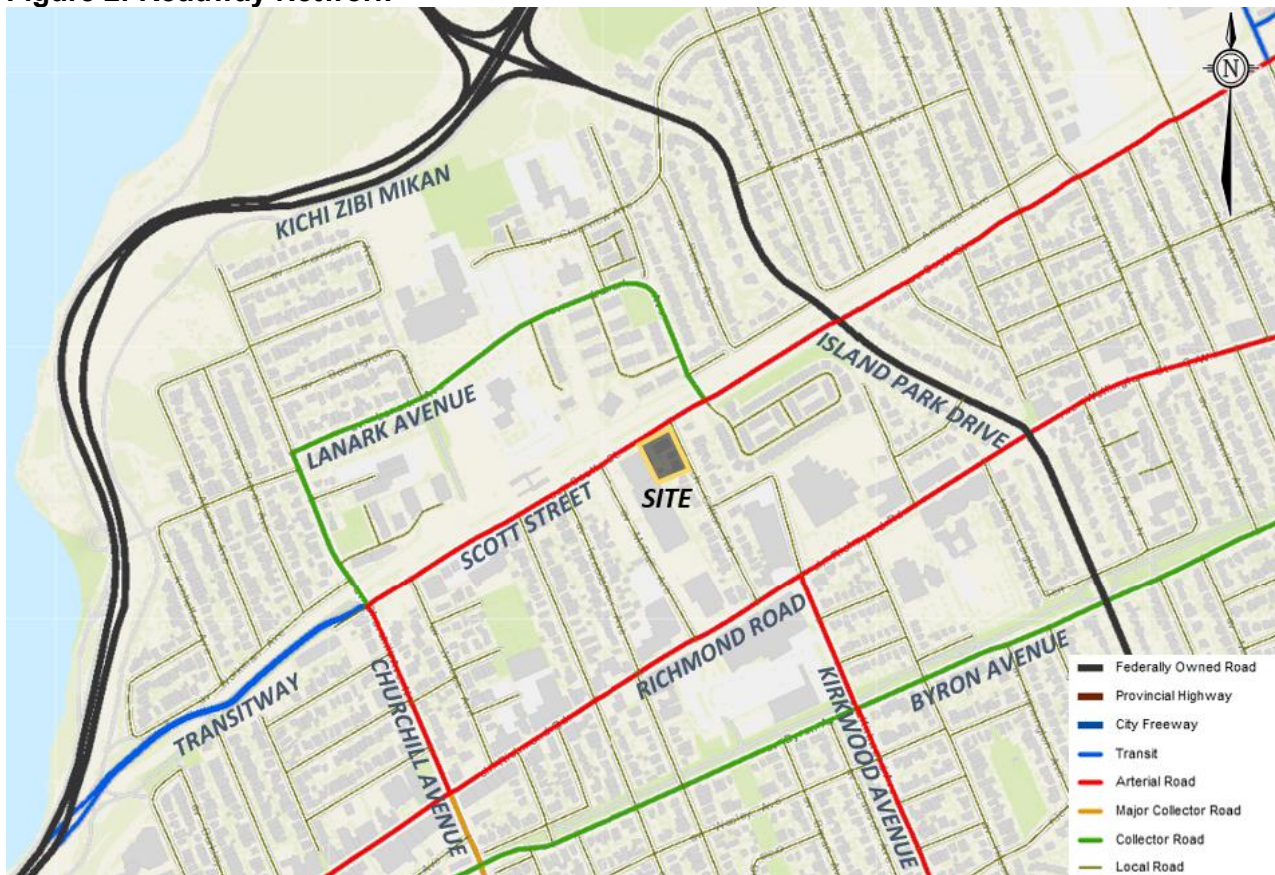
Clifton Road falls under the jurisdiction of the City of Ottawa, and is a north-south local roadway that runs from Scott Street to Richmond Road. The roadway has a two-lane semi-urban cross-section with a curb/sidewalk on the west side, and a posted speed limit of 30 km/h. Clifton Road is not designated as a truck route. One-hour parking between 7:00am and 7:00pm is permitted on the east side of the roadway year-round. One-hour weekday parking from 7:00pm to 7:00am and all-day weekend parking is permitted on the west side between April 1 and November 30 (fully prohibited from December 1 to March 31). The Official Plan does not reserve additional ROW protections for Clifton Road.

Lanark Avenue falls under the jurisdiction of the City of Ottawa, and is a collector roadway that generally travels on a north-south alignment between Scott Street and just south of Latchford Road, before curving onto an east-west alignment between Latchford Road and Churchill Avenue. Lanark Avenue has a two-lane undivided urban cross-section, sidewalks on both sides, and an unposted speed limit of 50 km/h. Lanark Avenue is not designated as a truck route. On-street parking is generally permitted on either side of the roadway, but is prohibited on the south side between Beechgrove Avenue and Churchill Avenue.

West Village Private is a curvilinear private roadway that runs south of Scott Street. The roadway has a two-lane undivided urban cross-section, no sidewalks, and a posted speed limit of 25 km/h. On-street parking is not permitted.

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

Figure 2: Roadway Network



2.1.2 Intersections

Scott Street/Lanark Avenue/West Village Private

- Signalized protected intersection
- North/South Approaches (Lanark/West Village): one left turn lane and one shared through/right turn lane
- East Approach (Scott Street): one left turn lane and one shared through/right turn lane
- West Approach (Scott Street): one left turn lane, one through lane, and one shared through (transit-exclusive)/right turn lane
- Crossrides and ladder crosswalks on all approaches
- Cycle tracks on east/west approaches



Scott Street/Clifton Road

- Unsignalized, stop-controlled on the minor approach (Clifton Road)
- South Approach (Clifton Road): one shared left turn/right turn lane (northbound right turn restriction during the weekday PM peak period)
- East Approach (Scott Street): one shared left turn/through lane (westbound left turn restriction during the weekday AM peak period)
- West Approach (Scott Street): one through lane and one shared through/right turn lane (eastbound through is transit-only)
- Crossride and ladder crosswalk on south approach
- Cycle tracks on east/west approaches

2.1.3 Driveways

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

Scott Street, north side

- None

Scott Street, south side

- One driveway to 1946 Scott Street
- One driveway to the mixed-use development at 1960 Scott Street
- Access to the parking area for a moving company at 1994 Scott Street

Clifton Road, west side

- Open frontage along 1950 Scott Street (site) with perpendicular parking
- Ten driveways to residences at 312-360 Clifton Road

Clifton Road, east side

- One driveway to 305 Clifton Road
- Twelve driveways to residences at 311-369 Clifton Road

2.1.4 Pedestrian and Cycling Facilities

Concrete sidewalks are provided on both sides of Lanark Avenue, Scott Street, and the west side of Clifton Road. West of the study area, intersection pedestrian signals are provided on Scott Street, east of Tweedsmuir Avenue and west of Athlone Avenue, providing easy pedestrian access to the Westboro Transit Station.

Cycle tracks are provided along both sides of Scott Street within the study area.

In the City of Ottawa's cycling network, Scott Street is classified as a Crosstown Bikeway. Clifton Road, Lanark Avenue, and West Village Private do not have any cycling route classifications.

2.1.5 Area Traffic Management

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

Speed humps and midblock or intersection narrowings have been implemented in select locations on Lanark Avenue and Clifton Road. At the Scott Street/Clifton Road intersection, there is signage indicating a restriction on northbound right turns from 3:00pm to 6:00pm on weekdays and a restriction on westbound left turns from 7:00am to 9:00am on weekdays. Authorized vehicles and bicycles are exempt from these restrictions.

2.1.6 Transit

The locations of OC Transpo bus stops in the vicinity of the subject site are described in **Table 1**, and are shown in **Figure 3**. A summary of the various routes which serve the study area is included in **Table 2**. Detailed route information and an excerpt from the OC Transpo System Map are included in **Appendix C**.

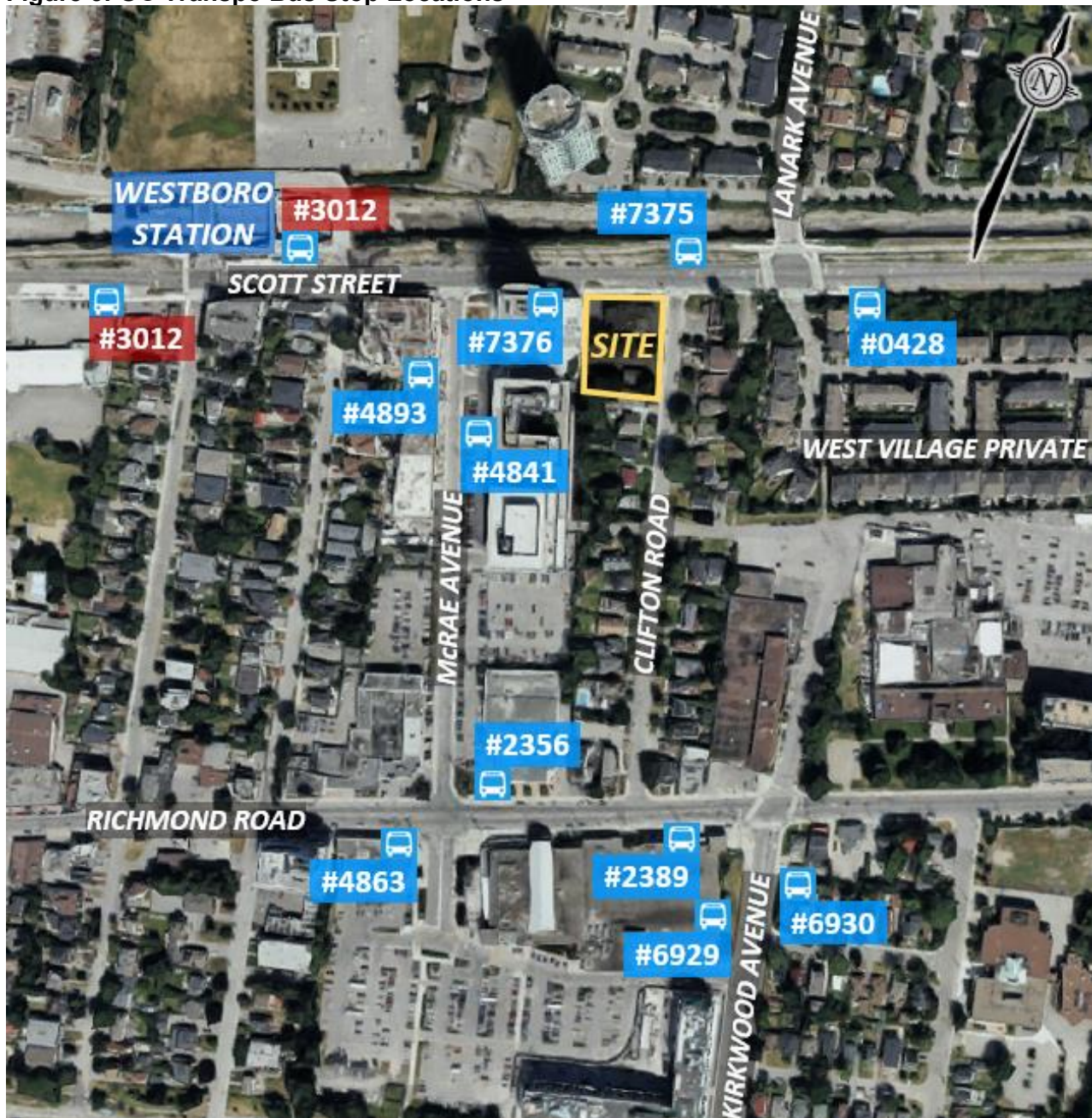
Table 1: OC Transpo Transit Stops

Stop	Location	Routes Served
#0428	South side of Scott Street, east of West Village Private	50, 81
#2356	North side of Richmond Road, east of McRae Avenue	11, 81, 153
#2389	South side of Richmond Road, west of Kirkwood Avenue	11, 81, 153
#3012 (Westboro)	North side of Scott Street, between Athlone Avenue and Tweedsmuir Avenue; temporary platforms currently along Scott Street during LRT construction	16, 50, 57, 61, 62, 63, 64, 66, 67, 73, 74, 75, 82, 87, 153, 164, 252, 256, 257, 258, 261, 262, 263, 264, 265, 267, 268, 282, 404
#4841	East side of McRae Avenue, south of Scott Street	81, 153
#4863	South side of Richmond Road, west of McRae Avenue	11
#4893	West side of McRae Avenue, south of Scott Street	81, 153
#6929	West side of Kirkwood Avenue, south of Richmond Road	51, 81
#6930	East side of Kirkwood Avenue, south of Richmond Road	51
#7375	North side of Scott Street, east of Clifton Road	50, 81
#7376	South side of Scott Street, east of McRae Avenue	50, 153

Table 2: OC Transpo Route Information

Route	From ↔ To	Frequency
11	Lincoln Fields / Bayshore ↔ Laurier	15-30 minute headways, 7 days per week, all day service
16	Main ↔ Tunney's Pasture / Westboro	30 minute headways, 7 days per week, all day service
50	Tunney's Pasture ↔ Lincoln Fields	30 minute headways, Mon-Sat
51	Tunney's Pasture ↔ Britannia	15-30 minute headways, 7 days per week, all day service
57	Tunney's Pasture ↔ N Rideau	30 minute headways, 7 days per week, all day service
61	Terry Fox / Stittsville ↔ Tunney's Pasture / Gatineau	20 minute headways, 7 days per week, all day service
62	Terry Fox / Stittsville ↔ Tunney's Pasture	30 minute headways, 7 days per week, all day service
63	Briarbrook ↔ Tunney's Pasture / Gatineau	5-10 minute headways during peak periods, 7-days per week, all day service
64	Morgan's Grant ↔ Tunney's Pasture	15 minute headways during peak periods, Mon-Fri, all day service
66	Kanata / Solandt ↔ Gatineau/Tunney's Pasture	15 minute headways, Mon-Fri, peak periods only
67	Terry Fox / Tunney's Pasture ↔ Cope	30 minute headways, Mon-Fri, all day service
73	Leikin ↔ Tunney's Pasture	30 minute headways, Mon-Fri, peak periods only
74	Nepean Woods ↔ Tunney's Pasture	30 minute headways, 7 days per week, all day service
75	Tunney's Pasture / Gatineau ↔ Barrhaven Centre / Cambrian	15 minute headways, 7 days per week, all day service
81	Tunney's Pasture ↔ Clyde	30 minute headways, 7 days per week, no evening service on weekends
82	Lincoln Fields / Tunney's Pasture ↔ Bayshore	30 minute headways, 7 days per week, all day service
87	Tunney's Pasture ↔ Baseline	15 minute headways, 7 days per week, all day service
153	Tunney's Pasture / Carlingwood ↔ Lincoln Fields	60 minute headways, 7 days per week, select time periods
252	Tunney's Pasture ↔ Templeford	30 minute headways, Mon-Fri, peak periods only
256	Tunney's Pasture ↔ Bridlewood	30 minute headways, Mon-Fri, peak periods only
257	Tunney's Pasture ↔ Bridlewood	30 minute headways, Mon-Fri, peak periods only
258	Grandview ↔ Tunney's Pasture	30 minute headways, Mon-Fri, peak periods only
261	Tunney's Pasture ↔ Stittsville Main	30-60 minute headways, Mon-Fri, peak periods only
262	Tunney's Pasture ↔ West Ridge	30 minute headways, Mon-Fri, peak periods only
263	Tunney's Pasture ↔ Stanley Corners	60 minute headways, Mon-Fri, peak periods only
264	Tunney's Pasture ↔ Terry Fox	60 minute headways, Mon-Fri, peak periods only
265	Tunney's Pasture ↔ Beaverbrook	60 minute headways, Mon-Fri, peak periods only
267	Tunney's Pasture ↔ Glen Cairn	30 minute headways, Mon-Fri, peak periods only
268	Tunney's Pasture ↔ Kanata Lakes	30 minute headways, Mon-Fri, peak periods only
282	Trend-Arlington ↔ Tunney's Pasture	30 minute headways, Mon-Fri, peak periods only
404	Canadian Tire Centre ↔ Tunney's Pasture	5-20 minute headways, only during periods before or after events at the Canadian Tire Centre

Figure 3: OC Transpo Bus Stop Locations



Note: Temporary bus platforms on Scott Street are provided for Westboro Station (stop #3012) during construction of the Confederation Line LRT extension. The eastbound platform is located along the frontage to 2026 Scott Street, and the westbound platform is located between Athlone Avenue and Tweedsmuir Avenue.

2.1.7 Existing Traffic Volumes

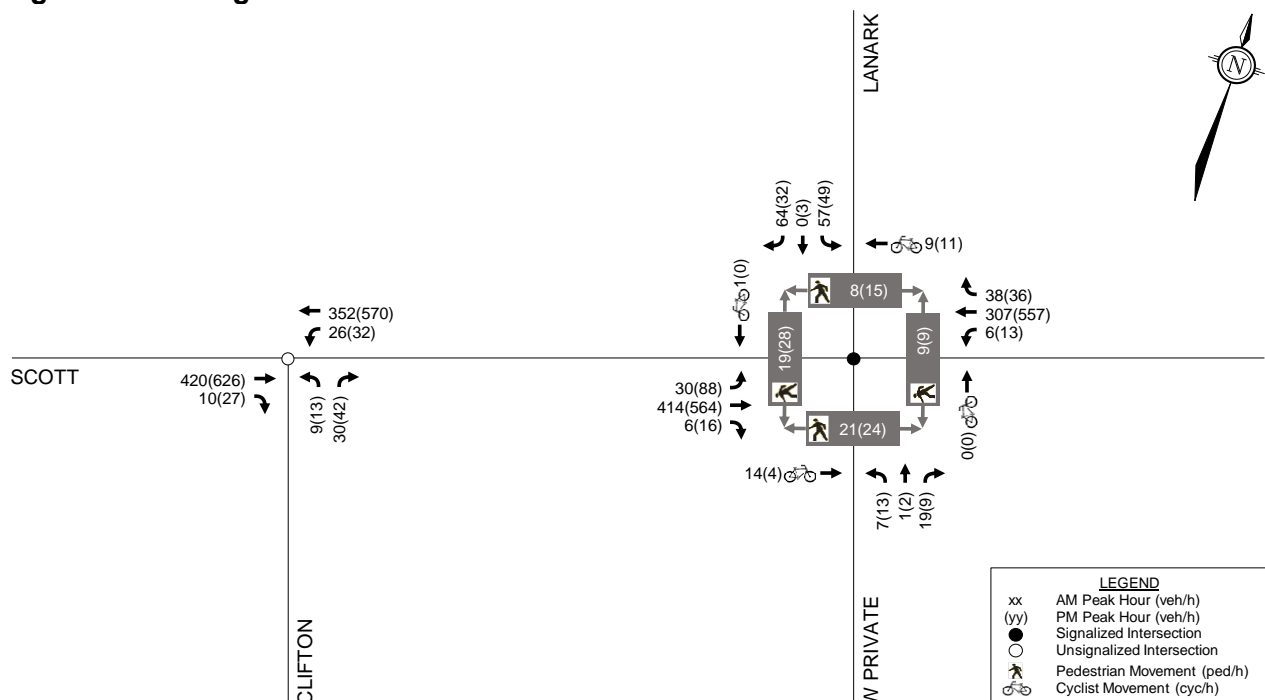
Weekday traffic counts were completed by the City of Ottawa or for recent TIA studies and have been used to determine the existing traffic volumes at the study area intersections. The traffic counts were completed on the following dates.

Intersection	Count Date	Source
• Scott Street/Clifton Road	May 24, 2018	(2019 TIA, 1950 Scott)
• Scott Street/Lanark Avenue/West Village Pvt	November 30, 2023	(City Count)

Pedestrian and cyclist counts were only completed at Scott Street/Lanark Avenue/West Village Private, and it is noted that the pedestrian and cyclist volumes observed may be higher during warmer months. The eastbound/westbound through volumes observed at Scott Street/Lanark Avenue/West Village Private has been carried to the Scott Street/Clifton Road intersection, as the count conducted at Scott Street/Clifton Road only considered traffic turning onto/from Clifton Road.

All traffic count data previously discussed are included in **Appendix D**. Traffic volumes within the study area are shown in **Figure 4**.

Figure 4: Existing Traffic Volumes



2.1.8 Collision Records

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

The collision data has been evaluated to determine if there are any identifiable collision patterns, which are defined in the *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

Intersection or Segment	Impact Types						Total
	Approach	Angle	Rear End	Sideswipe	Turning Movement	SMV ⁽¹⁾ /Other	
Scott Street/ Clifton Road	-	2	-	-	-	-	2
Scott Street/Lanark Avenue/ West Village Private	-	1	-	-	1	-	2
Scott Street between McRae Avenue & Clifton Road	-	-	-	-	-	-	0
Scott Street between Clifton Road & Lanark Avenue	-	-	-	-	1	-	1
Clifton Road between Scott Street & Wilber Avenue	-	-	-	-	-	1	1

1. SMV = Single Motor Vehicle

Scott Street/Clifton Road

A total of two collisions were reported at this intersection in the last five years. These were both angle impacts. One of the collisions occurred in clear conditions and one occurred in snowy conditions. Neither collision resulted in injuries.

Scott Street/Lanark Avenue/West Village Private

A total of two collisions were reported at this intersection in the last five years. These collisions included an angle impact and turning movement impact. Both impacts occurred in clear conditions, involved cyclists, and resulted in non-fatal injuries.

The two collisions occurred prior to the installation of a fully-protected intersection at this location, and collisions involving cyclists are anticipated to be mitigated in the future.

Scott Street between McRae Avenue & Clifton Road

No collisions were reported along this segment in the last five years.

Scott Street between Clifton Road & Lanark Avenue

One collision was reported along this segment in the last five years. This collision was a turning movement impact in clear conditions, and did not result in injuries.

Clifton Road between Scott Street & Wilber Avenue

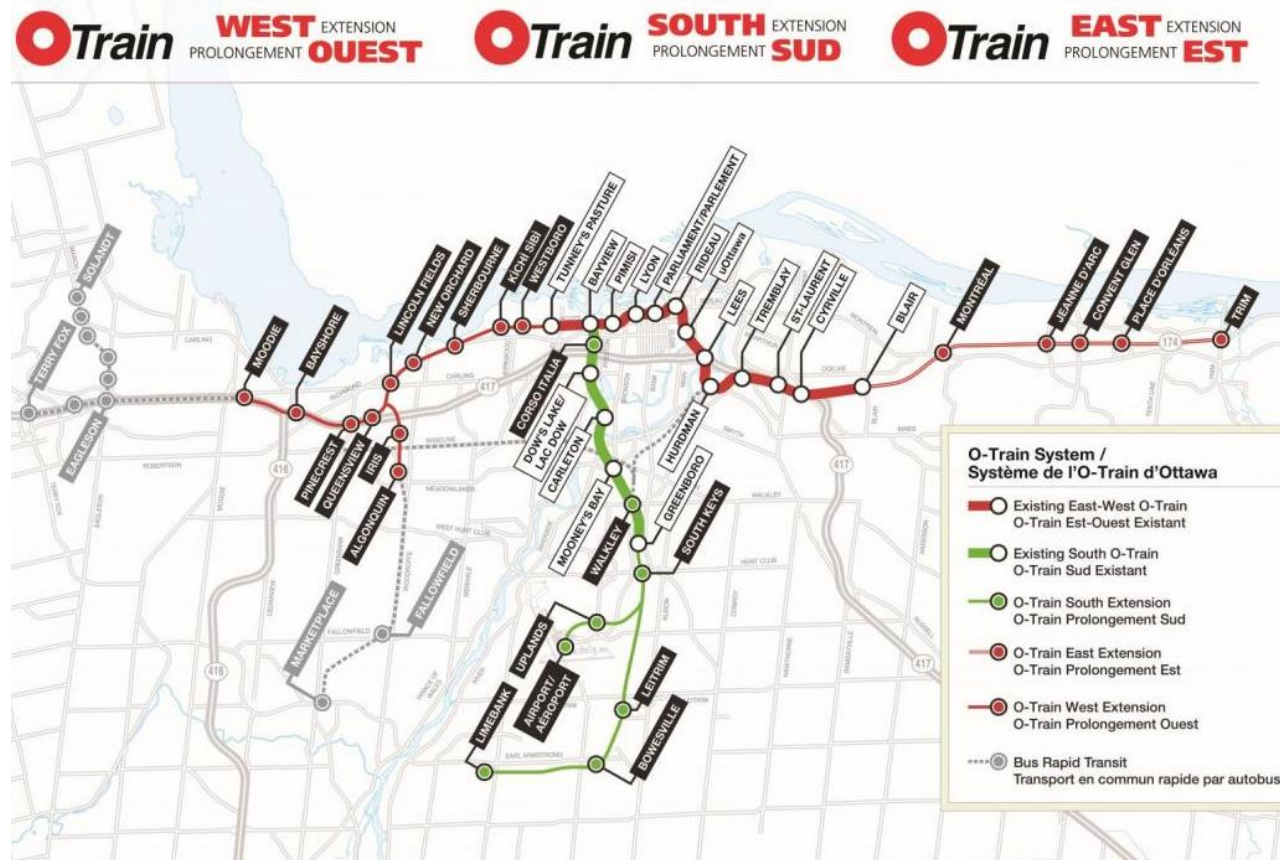
One collision was reported along this segment in the last five years. This collision was a single vehicle/other impact in clear conditions, and did not result in injuries.

2.2 Planned Conditions

2.2.1 Planned Transportation Projects

The City of Ottawa’s Transportation Master Plan (TMP) 2031 Affordable Rapid Transit and Transit Priority (RTTP) Network identifies the extension of Light Rail Transit (LRT) to the east, west, and south (Phase 2). Construction for Phase 2 of the LRT (i.e. the Confederation Line Extension West) began in 2019, and is anticipated to be completed in 2026. This project involves extending the western LRT terminus from Tunney’s Pasture Station to both Moodie Station and Algonquin College. As part of this project, the Westboro Transit Station will be converted to Westboro LRT Station. The planned western Confederation Line extension is shown in **Figure 5**.

Figure 5: LRT Phase 2 – Confederation Line Extension West



During the LRT Phase 2 construction, buses are routed off the existing Transitway onto Scott Street, which has been extended west of Churchill Avenue to Roosevelt Avenue, crossing to the north side of the Transitway on a temporary bridge at Roosevelt Avenue and extended westerly from Workman Avenue to Kichi Zibi Mikán Parkway. This detour is anticipated to be used by buses until 2026 (i.e. the estimated completion time for Phase 2 LRT). It is acknowledged that the temporary Westboro Station platforms on Scott Street may remain in place for a period after rail service begins.

Once the Scott Street transitway detour is removed, the bulbout on Scott Street at the subject site and 1960 Scott Street will remain, and a second bulbout at the northwest corner of Scott Street/ Clifton Road will be implemented. This new bulbout will not narrow the Clifton Road throat at the intersection with Scott Street. The two bulbouts will delineate a parking lay-by along the subject site's frontage to Scott Street, and will replace the eastbound transit-exclusive lane. The eastbound right turn/transit through lane at Scott Street/Lanark Avenue/West Village Private will also be removed. The existing cycle track and sidewalk on the south side of Scott Street will not be impacted by this conversion.

South of the study area, the 2031 Affordable RTTP Network identifies Richmond Road/Wellington Street West/Somerset Street as a Transit Priority Corridor with Isolated Measures. Transit signal priority is planned between Woodroffe Avenue and Bank Street.

2.2.2 Other Area Developments

A review of the City's Development Application Search Tool has been conducted to identify any developments in the vicinity of the subject site that are being constructed, are approved, or are in the approval process. Other developments in the area are described as follows:

210 Clearview Avenue

A residential development is proposed at 310 Clearview Avenue. This development proposed 177 apartment units. A TIA, dated April 2023, was prepared by CGH Transportation in support of Official Plan Amendment and Zoning By-Law Amendment applications for this development. The estimated date of full occupancy is 2027.

316-332 Clifton Road

A TIA Screening form was prepared in support of a development that includes 29 dwelling units and an internal private road with two connections to Clifton Road. Since the form identified that the development did not screen in for a TIA due to the low trip generation and other factors, a TIA was not prepared or required. The form identified a buildout year of 2025.

319-327 Richmond Road, 380 Winona Avenue, and 381 Churchill Avenue

A mixed-use development is proposed at 319-327 Richmond Road, 380 Winona Avenue, and 381 Churchill Avenue. This development proposes 184 apartment units and 1,738m² of retail space. Access is proposed on Churchill Avenue and Winona Avenue. A TIA was prepared by CGH Transportation, dated May 2020, in support of this development. The estimated date of occupancy was 2022.

320 McRae Avenue

A mixed-use development is under construction at 320 McRae Avenue. This development proposes 307 apartment units, 11 townhouses, and 9,494 ft² of commercial land uses. A TIA, dated January 2020, was prepared by CGH Transportation in support of a Site Plan application for this development. The estimated date of full occupancy was 2022.

335 Roosevelt Avenue

A residential development is proposed at 335 Roosevelt Avenue. The development proposes two high-rise residential buildings with 246 units and two mid-rise residential buildings with 17 units. A TIA report, dated December 2020 and revised March 2022, was prepared by Novatech in support of Official Plan Amendment and Zoning By-Law Amendment applications for this site. The estimated date of full occupancy is 2026.

1946 Scott Street

A residential development is proposed at 1946 Scott Street. This development proposes a 12-storey building with approximately 60 apartment units. A TIA was prepared by Parsons, dated August 2017, in support of this development. The estimated date of full occupancy was 2019.

1950 Scott Street

A Transportation Brief was prepared by Parsons in July 2018, in support of a 20-storey development with 141 condominium/apartment units at the subject site. Traffic count data at Scott Street/Clifton Road was obtained from this study.

2026 Scott Street

A mixed-use development is proposed at 2026 Scott Street. This development proposes two 40-storey buildings with a total of approximately 856 apartment units and 3,207 ft² of ground-floor commercial space. A TIA was prepared by Novatech, dated April 2024. The estimated date of occupancy for the first building is 2026 and the estimated date of occupancy for the second building is 2029.

2050 Scott Street

A mixed-use development is proposed directly west of the subject site. The development proposes a 30-storey residential building on three- and six- storey podiums with approximately 353 units and 233m² of ground floor commercial/office. Access is proposed via Scott Street. A TIA report was prepared by Parsons, dated February 2021, in support of a Zoning By-Law Amendment for the proposed development. The estimated date of occupancy was 2021.

2070 Scott Street

A mixed-use development is proposed at the southeast corner of the Scott Street/Churchill Avenue intersection. The development proposes a 23-storey tower with 241 units and 5,500 ft² of retail. An underground parking garage with access to Winona Avenue is proposed. A TIA was prepared by Stantec, dated November 2019, in support of a Zoning By-Law Amendment and Site Plan Control for this development. The estimated date of occupancy was 2022.

2.3 Study Area and Time Periods

The study area for this report includes the boundary roadways Scott Street and Clifton Road, as well as the following intersections:

- Scott Street/Clifton Road;
- Scott Street/Lanark Avenue/West Village Private.

The selected time periods for this TIA are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The buildout year 2026 and horizon year 2031 will be considered.

2.4 Access Design

Residential and commercial loading activities are proposed to take place curbside on Clifton Road and Scott Street, respectively. Access to the proposed underground parking garage will be provided via one full-movement driveway to Clifton Road. The design of the proposed access has been evaluated using the relevant provisions of the City's *Private Approach By-Law* (PABL) and *Zoning By-Law* (ZBL), and the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*.

Section 25(1)(a) of the PABL identifies that, for sites with 35m to 150m of frontage, a maximum of two two-way private approaches are permitted. This requirement is met, as one access is proposed to the Clifton Road frontage.

Section 25(1)(c) of the PABL identifies a maximum width requirement of 9.0m for any two-way private approach, as measured at the street line. This requirement is met by the proposed access to Clifton Road.

Section 107(1)(a) of the ZBL requires any two-way private approach serving an apartment parking garage with 20 or more parking spaces to have a minimum width of 6.0m and a maximum width of 6.7m. The proposed access to Clifton Road will be approximately 6.0m in width, meeting the requirements.

Based on Section 25(m)(ii) of the PABL, the nearest edge of any private approach that serves 20 to 99 parking spaces must be a minimum of 18m from the nearest intersecting street line, when the approach serves a residential development that is located within 46m of an arterial roadway. This requirement is met by the proposed access to Clifton Road.

Section 25(1)(p) of the PABL identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. This requirement is not met by the proposed garage access to Clifton Road, which is 2.2m from the southern property line. TAC's *Geometric Design Guide* identifies a recommended minimum spacing of 1m between curb returns of adjacent residential driveways to local and collector roadways. The adjacent approved development at 316-332 Clifton Road proposes an egress driveway at the shared property line with the subject site, however both developments are not anticipated to generate high volumes of traffic, and conflicts between the two driveways are anticipated to be minimal.

Section 25(1)(u) of the PABL identifies a requirement that any private approach serving a parking area with more than 50 parking spaces shall not have a grade exceeding 2% for the first 9m inside the property line. A waiver of this requirement is requested. The proposed maximum grade of the garage ramp is approximately 3.3% from the sidewalk to the garage door (i.e. for a distance of approximately 7.5m). This grade is not anticipated to obscure drivers' vision of pedestrians crossing the proposed access, as an entire vehicle can be located outside of the proposed building before crossing the sidewalk on Clifton Road.

Section 107(1)(c) of the ZBL identifies that any drive aisles serving parking spaces within a parking garage must have a minimum width of 6.0m. As the width of all drive aisles within the parking garage have a width of 6.0m or greater, this requirement is met.

TAC's *Geometric Design Guide* identifies minimum stopping sight distance (SSD) and intersection sight distance (ISD) requirements, based on the roadway grade and design speed (taken as the speed limit plus 10 km/h). A level roadway grade and design speed of 40 km/h for Clifton Road have been assumed in this review. The minimum SSD required is 50m, and the minimum ISD desired is 85m for left turns and 75m for right turns.

As Clifton Road is a straight and generally level roadway, adequate SSD can be provided at the proposed access location. It is anticipated that adequate ISD can be provided for any vehicles turning left or right from the proposed access as well, as there is very limited vegetation on neighbouring properties that could obscure sightlines for outbound drivers.

2.5 Development-Generated Travel Demand

2.5.1 Trip Generation

The traffic volumes at Scott Street/Clifton Road were collected in 2018, when the previous use of the subject site (International Buddhist Progress Society of Ottawa) was operational. In the interest of providing a conservative study, any trips generated by the previous use have not been deducted from the trip generation estimates below.

Proposed Residential Trip Generation

The number of person trips generated by the proposed residential dwellings have been estimated using the *TRANS Trip Generation Manual*, which present peak hour trip generation rates and mode shares for different types of housing for the AM and PM peak periods. The data is divided into rates and mode shares for Single-Family Detached Housing, Low-Rise Multifamily Housing (one or two storeys), and High-Rise Multifamily Housing (three or more storeys). For the High-Rise Multifamily Housing land use, the process of converting the trip generation estimates from peak period to peak hour is shown as follows.

The *TRANS Trip Generation Manual* identifies the subject site as being located within the Ottawa West district, which has the following observed mode shares for high-rise multifamily housing during the peak hours:

- Auto Driver: 28% AM peak, 33% PM peak;
- Auto Passenger: 11% AM peak, 11% PM peak;
- Transit: 41% AM peak, 26% PM peak;
- Cyclist: 3% AM peak, 7% PM peak;
- Pedestrian: 16% AM peak, 23% PM peak.

The subject site is located within a Transit-Oriented Development (TOD) zone. The City has provided target mode shares for any transit-oriented developments, which are the following:

- Auto Driver: 15% during both peak hours;
- Auto Passenger: 5% during both peak hours;
- Transit: 65% during both peak hours;
- Non-Auto: 15% during both peak hours.

It is assumed that the proposed residences will generally be consistent to the TOD mode shares with an increase to the pedestrian mode share, reflecting the higher number of pedestrians within the Ottawa West area.

The process of converting the trip generation estimates from peak period to peak hour is shown in the following tables. The estimated number of person trips generated by the proposed development during the AM and PM peak periods are shown in **Table 4**. A breakdown of these trips by mode share is shown in **Table 5**.

Table 4: Proposed Residential – Peak Period Trip Generation

Land Use	TRANS Rate	Units	AM Peak Period (ppp ⁽¹⁾)			PM Peak Period (ppp)		
			IN	OUT	TOT	IN	OUT	TOT
High-Rise Multifamily Housing	AM: 0.80 PM: 0.90	244	60	135	195	128	92	220

1. ppp: Person Trips per Peak Period

Table 5: Proposed Residential – Peak Period Trips by Mode Share

Travel Mode	Mode Share	AM Peak Period			PM Peak Period		
		IN	OUT	TOT	IN	OUT	TOT
Residential Person Trips		60	135	195	128	92	220
Auto Driver	15%	9	20	29	19	14	33
Auto Passenger	5%	3	7	10	6	5	11
Transit	55%	33	74	107	71	50	121
Cyclist	5%	3	7	10	6	5	11
Pedestrian	20%	12	27	39	26	18	44

Table 4 of the *TRANS Trip Generation Manual* includes adjustment factors to convert the estimated number of trips generated for each mode from peak period to peak hour. A breakdown of the peak hour trips by mode is shown in **Table 6**.

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

Travel Mode	Adj. Factor		AM Peak Hour			PM Peak Hour		
	AM	PM	IN	OUT	TOT	IN	OUT	TOT
Auto Driver	0.48	0.44	4	10	14	8	6	14
Auto Passenger	0.48	0.44	1	3	4	3	2	5
Transit	0.55	0.47	18	41	59	33	24	57
Cyclist	0.58	0.48	2	4	6	3	2	5
Pedestrian	0.58	0.52	7	16	23	13	10	23
Peak Hour Person Trips			32	74	106	60	44	104

From the previous table, the proposed residences are estimated to generate 106 person trips (including 14 vehicle trips) during the AM peak hour, and 104 person trips (including 14 vehicle trips) during the PM peak hour.

Proposed Commercial Trip Generation

The number of person trips generated by the proposed ground-floor commercial/retail units has been estimated using the trip generation rates in the *ITE Trip Generation Manual, 11th Edition*, corresponding to the Strip Retail Plaza (code 822) land use. Trips estimated using the *ITE Trip Generation Manual* have been converted to person trips using an adjustment factor of 1.28, consistent with the City’s *TIA Guidelines*. The *TRANS Trip Generation Manual* identifies the following observed mode shares for commercial developments within Ottawa West during the peak hours:

- Auto Driver: 55% AM peak, 50% PM peak;
- Auto Passenger: 11% AM peak, 16% PM peak;
- Transit: 11% AM peak, 11% PM peak;
- Cyclist: 0% AM peak, 5% PM peak;
- Pedestrian: 23% AM peak, 18% PM peak.

The assumed proposed ground-floor commercial is a blend of the TOD shares and the Ottawa West commercial mode shares described above, with an increase to the pedestrian mode share. This can be summarized as 30% driver, 10% passenger, 30% transit, 5% cyclist, and 25% pedestrian.

The estimated number of person trips generated by the proposed commercial uses are shown in **Table 7**, and broken down by mode share in **Table 8**.

Table 7: Proposed Commercial – Peak Hour Trip Generation

Land Use	ITE Code	GFA	AM Peak Hour (pph ⁽¹⁾)			PM Peak Hour (pph)		
			IN	OUT	TOT	IN	OUT	TOT
Strip Retail Plaza	822	2,098 ft ²	8	5	13	15	16	31

1. pph: Person Trips per Peak Hour

Table 8: Proposed Commercial – Peak Hour Trips by Mode Share

Travel Mode	Mode Share	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOT	IN	OUT	TOT
Commercial Person Trips		8	5	13	16	17	33
Auto Driver	30%	2	2	4	5	5	10
Auto Passenger	10%	1	-	1	1	2	3
Transit	30%	2	2	4	5	5	10
Cyclist	5%	1	-	1	1	1	2
Pedestrian	25%	2	1	3	4	4	8

From the previous table, the proposed ground-floor commercial is estimated to generate 13 person trips (including four vehicle trips) during the AM peak hour, and 33 person trips (including ten vehicle trips) during the PM peak hour.

Total Trip Generation

Based on the results of **Table 6** and **Table 8**, the total trip generation projections for the proposed development are included in **Table 9**.

Table 9: Net Person Trip Generation

Travel Mode	AM Peak Hour			PM Peak Hour		
	IN	OUT	TOT	IN	OUT	TOT
Proposed Residential Trips	32	74	106	60	44	104
Auto Driver	4	10	14	8	6	14
Auto Passenger	1	3	4	3	2	5
Transit	18	41	59	33	24	57
Cyclist	2	4	6	3	2	5
Pedestrian	7	16	23	13	10	23
Proposed Commercial Trips	8	5	13	16	17	33
Auto Driver	2	2	4	5	5	10
Auto Passenger	1	-	1	1	2	3
Transit	2	2	4	5	5	10
Cyclist	1	-	1	1	1	2
Pedestrian	2	1	3	4	4	8
Total Person Trips	40	79	119	76	61	137
Auto Driver	6	12	18	13	11	24
Auto Passenger	2	3	5	4	4	8
Transit	20	43	63	38	29	67
Cyclist	3	4	7	4	3	7
Pedestrian	9	17	26	17	14	31

From the previous table, the proposed development is projected to generate a total of 119 person trips (including 18 vehicle trips) during the AM peak hour, and 137 person trips (including 24 vehicle trips) during the PM peak hour.

2.5.2 Trip Distribution and Assignment

As the proposed development is projected to generate significantly less than 75 vehicle trips during the peak hours, intersection analysis is exempt from analysis (as shown in Section 2.6), and the site-generated volumes have not been distributed to the road network. All vehicle trips would be assigned to the proposed access to Clifton Road.

2.6 Exemptions Review

This module reviews possible exemptions from the final TIA, as outlined in the *TIA Guidelines*. The applicable exemptions for this site are shown in **Table 10**.

Table 10: TIA Exemptions

Module	Element	Exemption Criteria	Status
4.1 Development Design	4.1.2 Circulation and Access	<ul style="list-style-type: none"> Required for site plan control and zoning by-law amendment applications 	Not Exempt
	4.1.3 New Street Networks	<ul style="list-style-type: none"> Required for draft plan of subdivision applications 	Exempt
4.2 Parking	<i>All elements</i>	<ul style="list-style-type: none"> Required for site plan control and zoning by-law amendment applications 	Not Exempt
4.6 Neighbourhood Traffic Calming	<i>All elements</i>	<ul style="list-style-type: none"> If all of the following criteria are met: <ol style="list-style-type: none"> Access is provided to a collector or local roadway Application is for zoning by-law amendment or draft plan of subdivision Proposed development generated more than 75 vehicle trips Site trip infiltration is expected, and site-generated traffic will increase peak hour volumes by 50% or more along the route between the site and an arterial roadway The subject street segment is adjacent to two or more of the following significant sensitive land uses: <ul style="list-style-type: none"> School (within 250m walking distance) Park Retirement/older adult facility Licensed child care centre Community centre 50+% of adjacent properties along the route(s) are occupied by residential lands and at least ten dwellings are occupied 	Exempt
4.7 Transit	4.7.1 Transit Route Capacity	<ul style="list-style-type: none"> Required when proposed development generates more than 75 transit trips 	Exempt
	4.7.2 Transit Priority Requirements	<ul style="list-style-type: none"> Required when proposed development generates more than 75 vehicle trips 	Exempt
4.8 Network Concept	<i>All elements</i>	<ul style="list-style-type: none"> Required when development generates more than 200 person trips during the peak hour in excess of the equivalent volume permitted by the established zoning 	Exempt

Module	Element	Exemption Criteria	Status
4.9 Intersection Design	All elements	<ul style="list-style-type: none"> Required when proposed development generates more than 75 vehicle trips 	Exempt

Based on the foregoing, 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 BACKGROUND NETWORK TRAVEL DEMAND

3.1 General Background Growth Rate

A review of the City’s *Strategic Long-Range Model* has been conducted, comparing snapshots of the 2011 and 2031 AM peak hour traffic volumes. The long-range snapshots are included in **Appendix F**.

Within the study area, the long-range snapshots identify generally negative growth on Scott Street between 2011 and 2031. It is anticipated that the transit and non-auto infrastructure upgrades along Scott Street, which includes improvements such as the extension of the Confederation Line LRT and cycle tracks along Scott Street, will increase the use of active transportation modes. To maintain a conservative analysis, an annual growth rate of 0% for vehicular traffic volumes within the study area has been applied, and the traffic volumes generated by the other area developments described in the previous section have been added directly.

3.2 Other Area Developments

Traffic generated by the following proposed developments have been added to the future background volumes. Relevant excerpts from their associated traffic studies are included in **Appendix G**.

210 Clearview Avenue

The development proposes 177 apartment dwellings. The TIA report, prepared in April 2023 by CGH Transportation, estimated that full buildout of the development will occur in 2027. Therefore, traffic generated by this development has been added to the 2031 background volumes.

335 Roosevelt Avenue

The development proposes 246 high-rise dwellings and 17 mid-rise dwellings. The TIA report, prepared in December 2020 and revised in March 2022 by Novatech, estimated that full buildout of the development will occur in 2026. Therefore, traffic generated by this development has been added to the 2026 and 2031 background volumes.

319-327 Richmond Road, 380 Winona Avenue, and 381 Churchill Avenue

The development proposes 184 apartment dwellings and 1,738m² of retail space. The TIA report, prepared in May 2020 by CGH Transportation, estimated that full buildout of the development would occur in 2022. Therefore, traffic generated by this development has been added to the 2026 and 2031 background volumes.

320 McRae Avenue

The development proposes 307 apartment dwellings, 11 townhouses, and 9,494 ft² of commercial land uses. The TIA report, prepared in January 2020 by CGH Transportation, estimated that full buildout of the development would occur in 2022. Therefore, traffic generated by this development has been added to the 2026 and 2031 background volumes.

2026 Scott Street

The development proposes 856 apartment dwellings and 298m² of ground floor retail space. The TIA report, prepared in April 2024 by Novatech, estimated that buildout of Phase 1 will occur in 2026 and full buildout will occur in 2031. Therefore, traffic generated by Phase 1 has been added to the 2026 background volumes and traffic generated by the full development has been added to the 2031 background volumes.

2050 Scott Street

The development proposes 353 apartment dwellings and 233m² of ground floor commercial/office space. The TIA report, prepared in February 2021 by Parsons, estimates that full buildout of the development would occur in 2021. Therefore, traffic generated by this development has been added to the 2026 and 2031 background volumes.

2070 Scott Street

The development proposes 241 apartment dwellings and 5,500 ft² of retail space. The TIA report, prepared in November 2019 by Stantec, estimates that full buildout of the development would occur in 2022. Therefore, traffic generated by this development has been added to the 2026 and 2031 background volumes.

3.3 Future Traffic Conditions

The figures listed below show the following traffic volumes:

- Other area development traffic in 2026 is shown in **Figure 6**;
- Other area development traffic in 2031 is shown in **Figure 7**;
- Background traffic volumes in 2026 is shown in **Figure 8**;
- Background traffic volumes in 2031 is shown in **Figure 9**.

3.4 Demand Rationalization

The Demand Rationalization module includes identifying any locations and approaches where total auto demand is projected to exceed capacity, and what reduction in peak hour volumes are required for demand to meet capacity. However, determining whether any approach has volumes that exceed capacity requires intersection capacity analysis, which is outside the scope of this TIA (as shown in **Table 10**).

Figure 6: 2026 Other Area Development-Generated Traffic Volumes

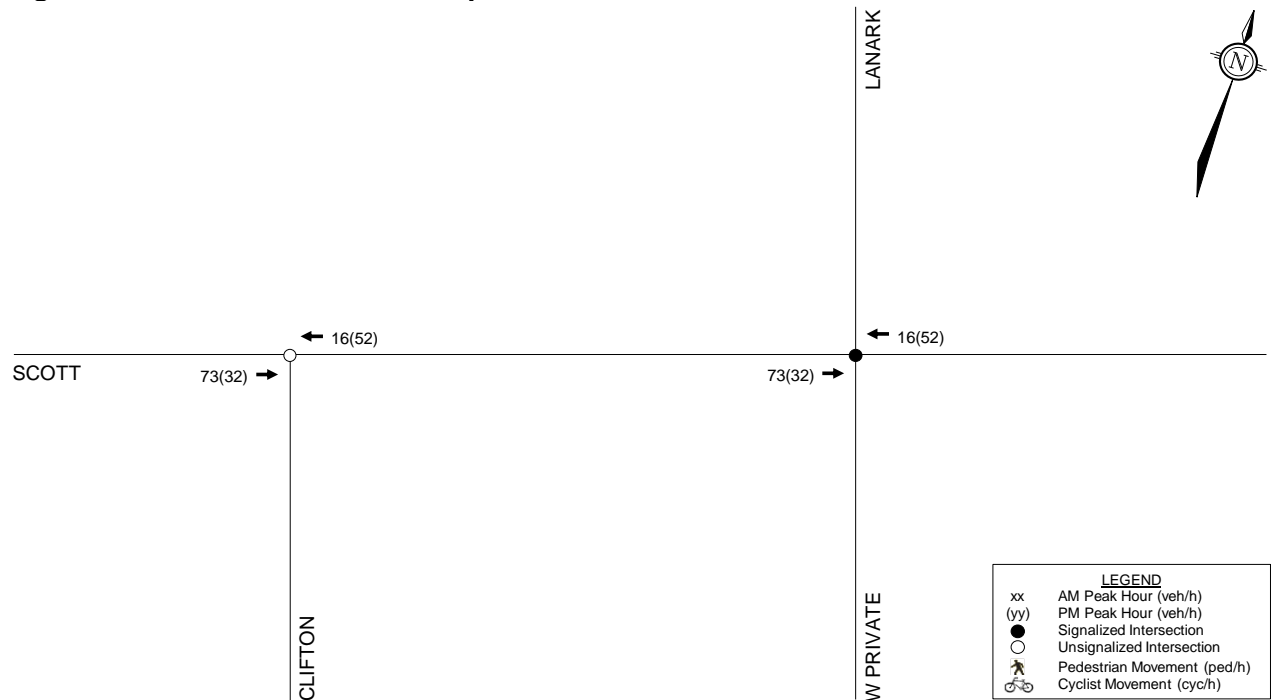


Figure 7: 2031 Other Area Development-Generated Traffic Volumes

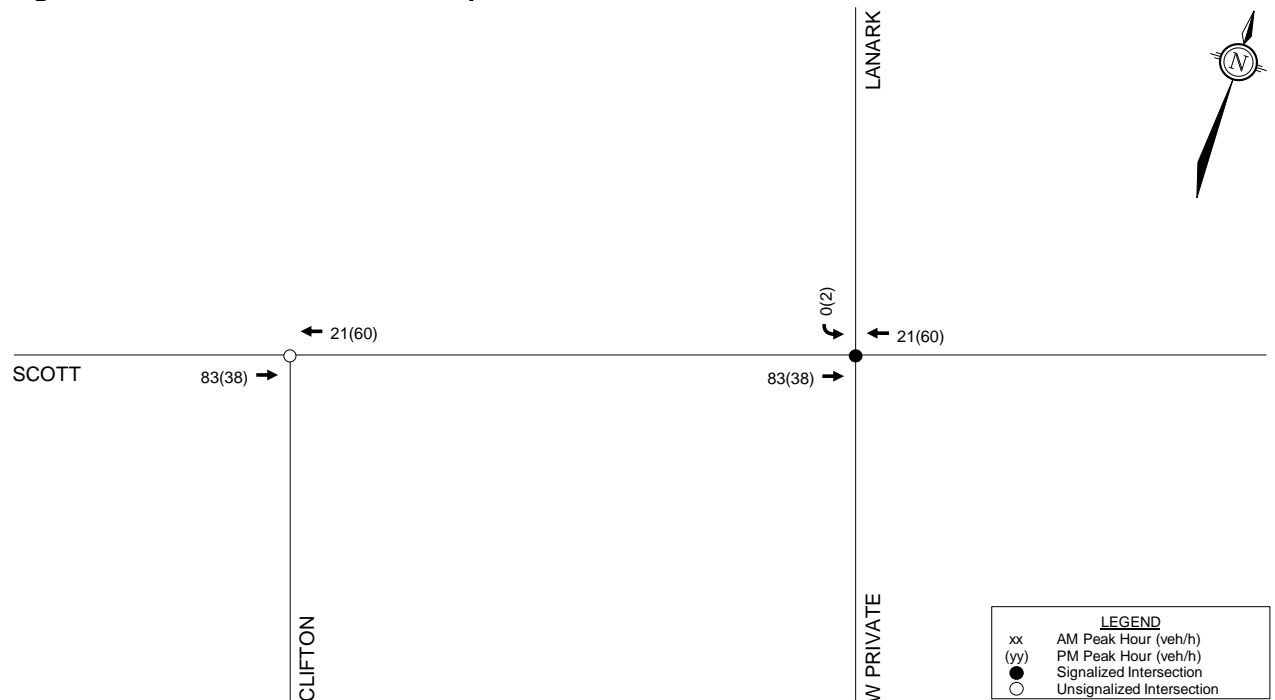


Figure 8: 2026 Background Traffic Volumes

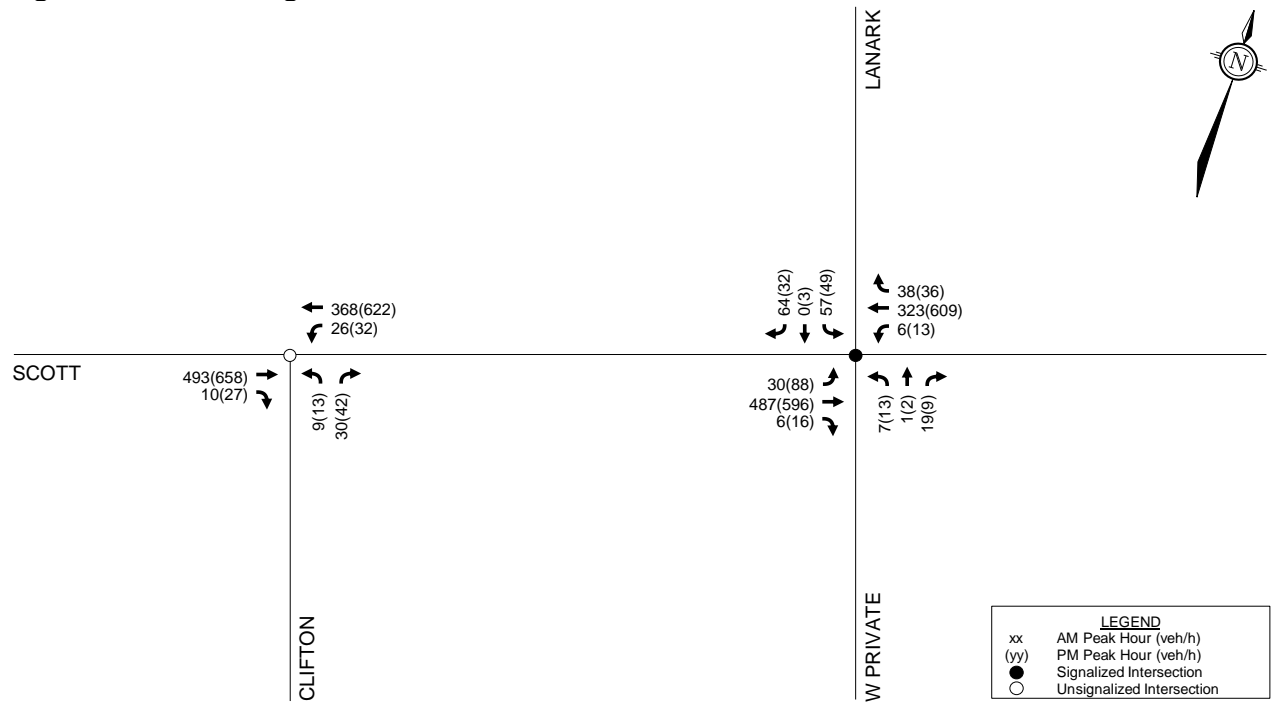
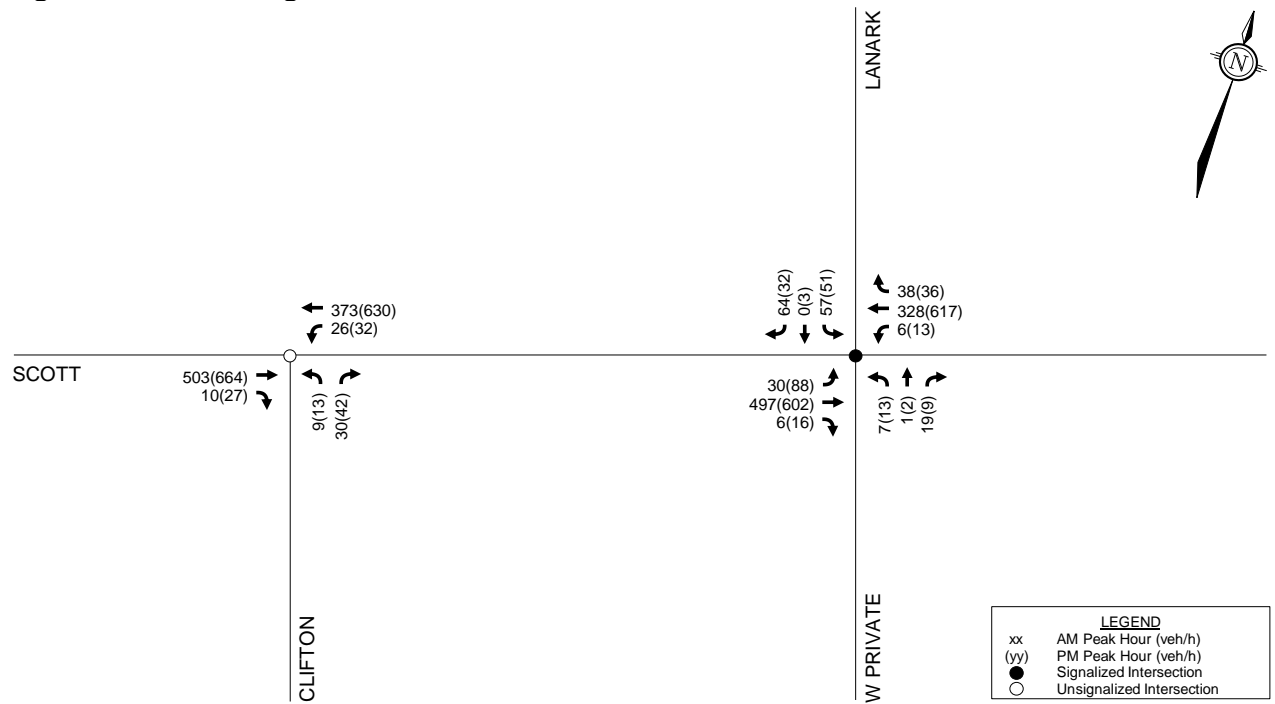


Figure 9: 2031 Background Traffic Volumes



4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

Sidewalks will be maintained along the subject site's frontages to Scott Street and Clifton Road, and internal walkways will be provided around the perimeter of the building to provide connectivity from all building entrances to these sidewalks.

A total of 252 bicycle parking spaces will be provided on-site, with 15 exterior spaces, 30 spaces in a bike room on the ground floor, and 207 spaces within the underground parking garage. The total number of bicycle parking spaces will meet the minimum required number of bicycle spaces per the City's ZBL.

OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. Main entrances to both proposed buildings are anticipated to be within 400m walking distance of Westboro Station and bus stops on Scott Street, McRae Avenue, or Richmond Road. These stops are shown in **Figure 3**.

A review of the *Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist* has been conducted, and is included in **Appendix H**. All required TDM-supportive design and infrastructure measures in the TDM checklist will be met. In addition to the required measures, it is anticipated that the following 'basic' or 'better' measures will be met:

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

4.1.2 Circulation and Access

The garbage room will be located within the underground parking garage, and garbage bins will be wheeled up to the curb, to be collected curbside on Clifton Road. There is no proposed on-site fire route for the development, as the main entrance fronts onto Scott Street.

The City's *Official Plan* identifies that loading should be internalized if possible, but this may be relaxed for lots that cannot reasonably accommodate loading areas without compromising site functionality. It is understood that no loading access to Scott Street will be supported, and loading access to Clifton Road cannot be accommodated based on the proposed parking garage access location and general building layout. Rather than provide an on-site loading zone that will be used intermittently, the proponent has prioritized landscaped and amenity areas that can be used by residents and visitors at all hours. Further discussion of curbside loading zones that will serve the subject site is included below.

A residential loading zone for move-ins is proposed to be located curbside on Clifton Road, between Scott Street and the existing bulbouts on Clifton Road. To accommodate this loading zone, it is proposed that the existing parking restrictions on the west side of Clifton Road be adjusted to allow for short-term parking year-round, north of the existing bulbouts. It is also proposed that the existing one-hour parking provision on the east side of Clifton Road be terminated north of the existing bulbouts. This is anticipated to have no impact on parking due to the existing access to 305 Clifton Road. The proposed residential loading zone location is along the wider section of Clifton Road, and further from the underground parking garage ramp, which provides improve sightlines for drivers exiting the ramp as they look toward Scott Street. An existing signage plan and a proposed signage plan identifying the proposed residential loading zone are included in **Figure 10** and **Figure 11**, respectively.

The existing bulbout on Scott Street that is straddling the subject site and the neighbouring property at 1960 Scott currently introduces a transit-exclusive lane. Once the Confederation Line LRT is open and the Scott Street bus detour is decommissioned, a second bulbout at the northwest corner of Scott Street/Clifton Road is planned to be implemented, and the two bulbouts will delineate a parking lay-by along the subject site’s frontage to Scott Street. It is proposed that signage to include a commercial loading space for the ground-floor units be included within this proposed lay-by on Scott Street.

4.2 Parking

The subject site is located in Area B of Schedule 1 and Area Y of Schedule 1A of the City’s ZBL, and is located within 600m of a rapid transit station as identified in Schedule 2A of the City’s ZBL. The minimum/maximum vehicular, minimum bicycle parking, and minimum loading spaces rates for the proposed development are identified in Sections 101, 102, 103, 111, and 113 of the ZBL.

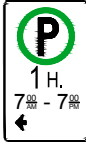
A review of the proposed parking supply versus the minimum/maximum parking requirements per the City’s ZBL are shown in **Table 11**.

Table 11: Parking Review

Land Use	Rate	Units	Required	Provided
<i>Minimum Resident and Visitor Vehicle Parking (Section 101/102 of ZBL)</i>				
Apartment, High-Rise	0.5 spaces per dwelling unit after the first 12 units and reduced by 20 overall, as all parking is below grade	244 units	96 (resident)	62
	0.1 spaces per dwelling unit after the first 12 units and up to a maximum of 30 spaces per building		23 (visitor)	25
Retail Store	No minimum retail parking rate, as it is located entirely on the ground floor and is less than 500 m ² GFA	195 m ²	0	0
Total			119	87
<i>Maximum Vehicle Parking (Exception 2581 or Section 103 of ZBL)</i>				
Apartment, High-Rise	1.15 spaces per dwelling unit, per Exception 2581 (combined resident and visitor parking)	244 units	281	87
Retail Store	3.6 spaces per 100 m ² GFA, per Section 103	195 m ²	7	0
Total			288	87
<i>Minimum Bicycle Parking (Exception 2581 or Section 111 of ZBL)</i>				
Apartment, High-Rise	1.0 spaces per dwelling unit, per Exception 2581	244 units	244	252
Retail Store	1.0 space per 250 m ² GFA, per Section 111	195 m ²	1	
Total			245	252



SCOTT S

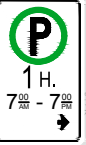


SCOTT STREET

REPLACE EXISTING
Rb-52 (DEC-MAR)
Rb-52 (APR-NOV)
WITH Rb-53L

PROPOSED 22-STORY
MIXED-USE BUILDING

FFE = 64.70
TOF = 58.40
P1=60.55 TO 64.75
P2=57.75 TO 60.55



Rb-53R

CLIFTON ROAD

CLIFTON ROAD



REPLACE EXISTING
Rb-53RL WITH
Rb-51L & Rb-53R

EXTENT OF PARKING GARAGE BELOW

EXTENT OF PARKING GARAGE BELOW



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

1950 SCOTT STREET

PROPOSED SIGNAGE

SCALE 1 : 500 0 5m 10m 20m

DATE JULY 2024 JOB 121301 FIGURE FIGURE 11

Based on the previous table, the proposed development will be 32 vehicle parking spaces short of the minimum vehicle parking requirement based on the current ZBL. However, it should be noted that the City’s *Official Plan* and draft updates to the ZBL seek to remove the requirement for minimum residential parking requirements (while maintaining a minimum parking requirement for visitors). It is requested that the proposed parking supply for the development be approved on this basis.

The proposed development will meet the maximum vehicle parking and minimum bicycle parking requirements outlined in the ZBL. There is no requirement to provide any loading spaces under Section 113 of the ZBL.

4.3 Boundary Streets

This section provides a review of the boundary streets Scott Street and Clifton Road, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation on the boundary streets. The MMLOS review has been conducted based on existing conditions.

Based on Exhibit 22 of the *MMLOS Guidelines*, the boundary streets have been evaluated using the targets for roadways ‘within 600m of a rapid transit station.’ A detailed MMLOS review of the boundary streets is included in **Appendix I**. A summary of the segment MMLOS results for Scott Street and Athlone Avenue is provided in **Table 12**.

Table 12: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Scott Street	C	A	A	A	D	A	B	D
Clifton Road	C		A	D	-	-	-	-

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

- Neither boundary street meets the target pedestrian level of service (PLOS) A;
- Both boundary streets meet the target bicycle level of service (BLOS) A or D;
- Scott Street does not meet the target transit level of service (TLOS) A;
- Scott Street meets the target truck level of service (TkLOS) D.

Per Exhibit 4 of the *MMLOS Guidelines*, Scott Street cannot achieve the target PLOS based on the magnitude of existing traffic volumes. The existing pedestrian facilities on Scott Street achieve the best-possible PLOS, and therefore, no recommendations are identified. The east side of Clifton Road does not include a sidewalk, and the target PLOS A can be achieved by constructing a sidewalk with a minimum width of 1.8m. This is identified for the City’s consideration.

Per Exhibit 15 of the *MMLOS Guidelines*, Scott Street can only achieve the target TLOS A by providing segregated transit facilities. Once Stage 2 of the Confederation Line LRT is complete, the bus detour will not need to run along Scott Street, and light rail transit will be provided immediately north of the roadway. Therefore, the target TLOS will be met.

4.4 Transportation Demand Management

4.4.1 Context for TDM

The proposed development will include 2,098 ft² of ground-floor commercial space, and 244 dwellings. The dwellings can be broken down by number of bedrooms as follows:

- 50 studio units;
- 124 one-bedroom units;
- 70 two-bedroom units.

4.4.2 Need and Opportunity

The subject site is designated as 'Corridor – Mainstreet' on Schedule B2 of the City's Official Plan, and within the Scott Street Traditional Main Street DPA. As shown in Section 2.5.1, the peak hour driver shares observed within the Ottawa West district (28% in AM peak and 33% in PM peak for residential generators, and 55% in AM peak and 50% in PM peak for commercial generators) are significantly greater than the driver share target for Transit-Oriented Developments (15% in both peaks). If the proposed residences have a driver share of 30% during the peak hours (i.e. more consistent with the observed residential shares within the Ottawa West district), rather than the assumed driver share of 15%, this would equate to an increase of approximately 13 to 14 vehicles during the peak hours.

A failure to meet the mode share targets is not anticipated to result in failing operations within the study area. It is anticipated that the mode share targets are attainable, as the subject site is proximally located to commercial areas, parks, and recreation areas, and within walking distance to future LRT service.

4.4.3 TDM Program

A review of the City's *TDM Measures Checklist* has been conducted by the proponent. A copy of the completed checklist is included in **Appendix H**. The proponent will provide the following TDM measures:

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

The proposed parking supply is 32 spaces short of the minimum requirements outlined in the current ZBL. Providing limited parking near transit stations act as a strong incentive for residents, visitors, and patrons of the proposed development to travel to/from the site via transit or active modes. Further, a total of 252 bicycle parking spaces are proposed. This equates to 1.03 bicycle spaces per unit, which meets the minimum requirement of 1.0 bicycle spaces per unit. It should be noted that this requirement was established during the Zoning By-Law Amendment application stage, and is more than twice the typical bicycle parking rate of 0.5 bicycle spaces per unit.

5.0 CONCLUSIONS AND RECOMMENDATIONS

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

Forecasting

- The proposed development is projected to generate a total of 119 person trips (including 18 vehicle trips) during the AM peak hour, and 137 person trips (including 24 vehicle trips) during the PM peak hour.

Access Design

- Access to the proposed underground parking garage will be provided via one full-movement driveway to Clifton Road. The design of the proposed access meets most relevant provisions of the City's *Private Approach By-Law* (PABL) and *Zoning By-Law* (ZBL), and the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*.
- Section 25(1)(p) of the PABL identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. This requirement is not met by the proposed garage access to Clifton Road, which is 2.2m from the southern property line. TAC's *Geometric Design Guide* identifies a recommended minimum spacing of 1m between curb returns of adjacent residential driveways to local and collector roadways. The adjacent approved development at 316-332 Clifton Road proposes a driveway at the shared property line with the subject site, however both developments are not anticipated to generate high volumes of traffic, and conflicts between the two driveways are anticipated to be minimal.
- Section 25(1)(u) of the PABL identifies a requirement that any private approach serving a parking area with more than 50 parking spaces shall not have a grade exceeding 2% for the first 9m inside the property line. A waiver of this requirement is requested. The proposed maximum grade of the garage ramp is approximately 3.3% from the sidewalk to the garage door (i.e. for a distance of approximately 7.5m). This grade is not anticipated to obscure drivers' vision of pedestrians crossing the proposed access, as an entire vehicle can be located outside of the proposed building before crossing the sidewalk on Clifton Road.

Development Design and Parking

- Sidewalks will be maintained along the subject site's frontages to Scott Street and Clifton Road, and internal walkways will be provided around the perimeter of the building to provide connectivity from all building entrances to these sidewalks.
- A total of 252 bicycle parking spaces will be provided on-site, with 15 exterior spaces, 30 spaces in a bike room on the ground floor, and 207 spaces within the underground parking garage. This equates to 1.03 bicycle spaces per unit, which meets the minimum requirement of 1.0 bicycle spaces per unit. It should be noted that this requirement was established during the Zoning By-Law Amendment application stage, and is more than twice the typical bicycle parking rate of 0.5 bicycle spaces per unit.
- The proposed parking supply is 32 spaces short of the minimum requirement. Providing limited parking near transit stations act as a strong incentive for residents, visitors, and patrons of the proposed development to travel to/from the site via transit or active modes.

- OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. Main entrances to both proposed buildings are anticipated to be within 400m walking distance of Westboro Station and bus stops on Scott Street, McRae Avenue, or Richmond Road.
- All required Transportation Demand Management (TDM)-supportive design and infrastructure measures in the checklist will be met.
- The garbage room will be located within the underground parking garage, and garbage bins will be wheeled up to the curb, to be collected curbside on Clifton Road. There is no proposed on-site fire route for the development, as the main entrance fronts onto Scott Street.
- A residential loading zone for move-ins is proposed to be located curbside on Clifton Road, between Scott Street and the existing bulbouts on Clifton Road. To accommodate this loading zone, it is proposed that the existing parking restrictions on the west side of Clifton Road be adjusted to allow for short-term parking year-round, north of the existing bulbouts. It is also proposed that the existing one-hour parking provision on the east side of Clifton Road be terminated north of the existing bulbouts. This is anticipated to have no impact on parking due to the existing access to 305 Clifton Road. The proposed residential loading zone location is along the wider section of Clifton Road, and further from the underground parking garage ramp, which provides improve sightlines for drivers exiting the ramp as they look toward Scott Street.
- The existing bulbout on Scott Street that is straddling the subject site and the neighbouring property at 1960 Scott currently introduces a transit-exclusive lane. Once the Confederation Line LRT is open and the Scott Street bus detour is decommissioned, a second bulbout at the northwest corner of Scott Street/Clifton Road is planned to be implemented, and the two bulbouts will delineate a parking lay-by along the subject site's frontage to Scott Street. It is proposed that signage to include a commercial loading space for the ground-floor units be included within this proposed lay-by on Scott Street.

Boundary Streets

- The results of the segment MMLOS analysis can be summarized as follows:
 - Neither boundary street meets the target pedestrian level of service (PLOS) A;
 - Both boundary streets meet the target bicycle level of service (BLOS) A or D;
 - Scott Street does not meet the target transit level of service (TLOS) A;
 - Scott Street meets the target truck level of service (TkLOS) D.
- The existing pedestrian facilities on Scott Street achieve the best-possible PLOS, and therefore no recommendations are identified. The east side of Clifton Road does not include a sidewalk, and the target PLOS A can be achieved by constructing a sidewalk with a minimum width of 1.8m. This is identified for the City's consideration.
- Once Stage 2 of the Confederation Line LRT is complete, the bus detour will not need to run along Scott Street, and light rail transit will be provided immediately north of the roadway. Therefore, the target TLOS will be met.

Transportation Demand Management

- A review of the City's *TDM Measures Checklist* has been conducted by the proponent, and will provide the following TDM measures:
 - Display local area maps with walking/cycling access routes and key destinations at major entrances;
 - Display relevant transit schedules and route maps at entrances;
 - Unbundle parking cost from monthly rent;
 - Provide a multi-modal travel information package to new residents or employees.

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

NOVATECH

Prepared by:

Reviewed by:



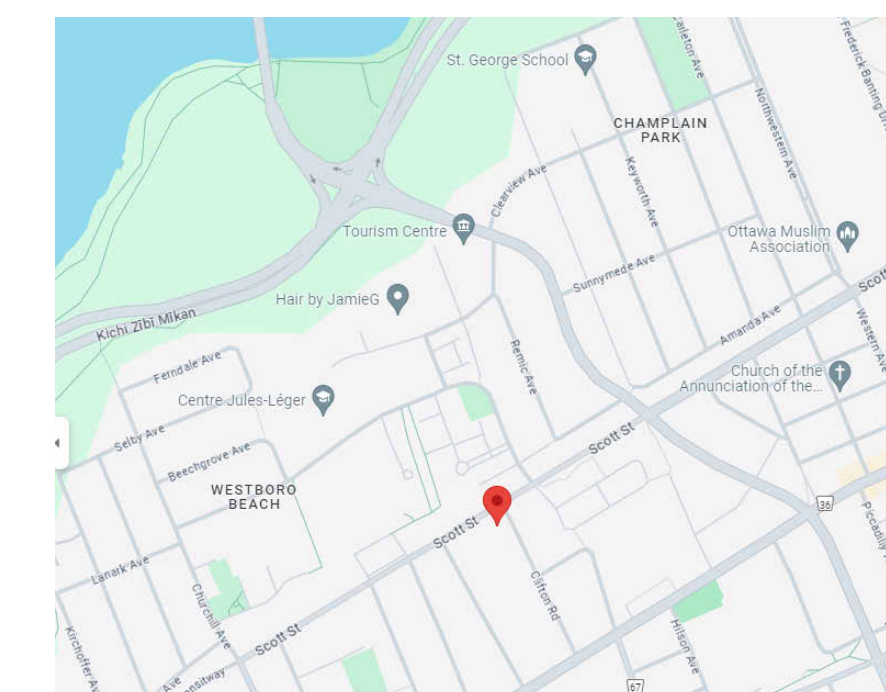
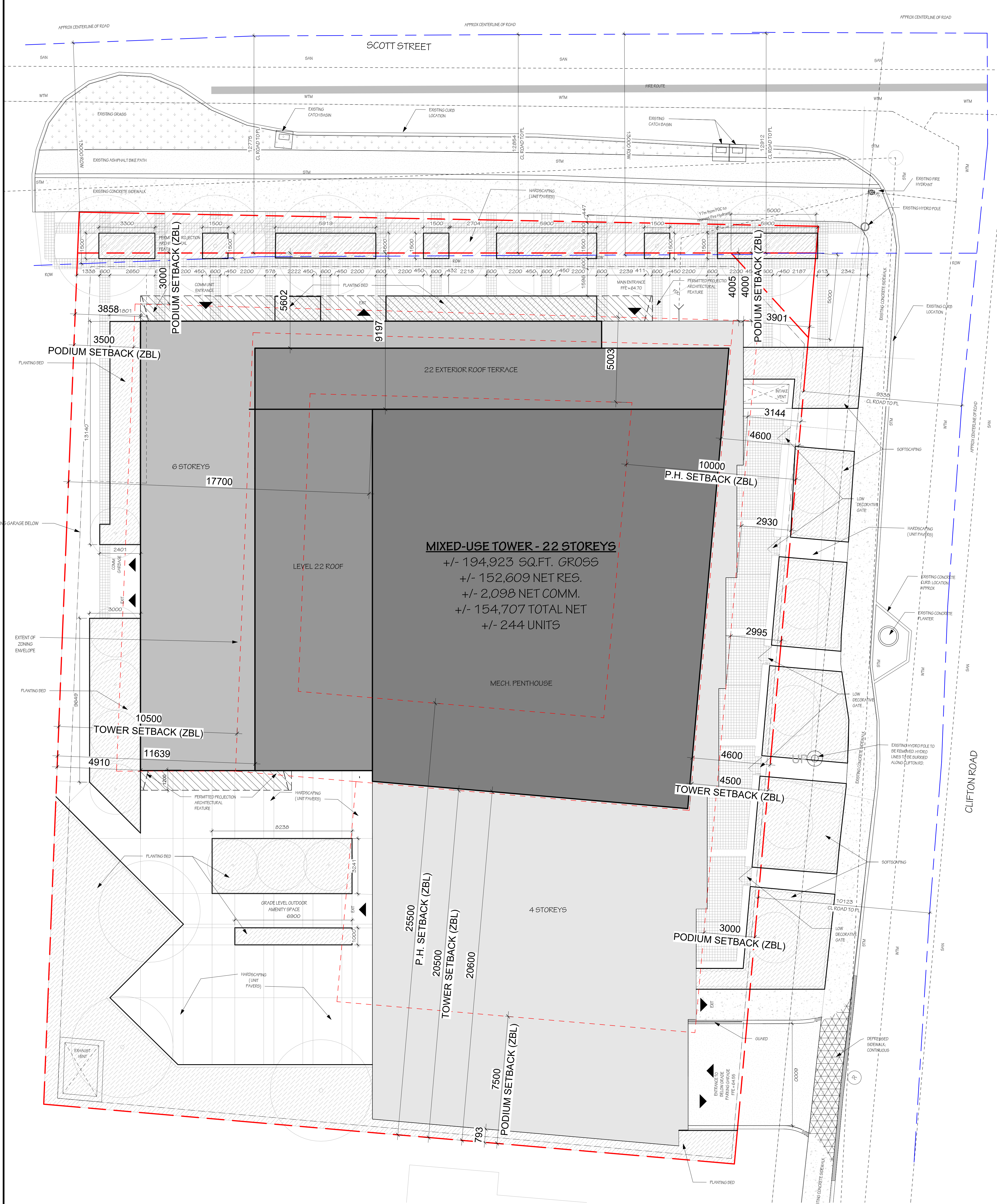
Joshua Audia, P.Eng.
Project Engineer | Transportation

Brad Byvelds, P.Eng.
Project Manager | Transportation

APPENDIX A

Site Plan

NOT FOR CONSTRUCTION

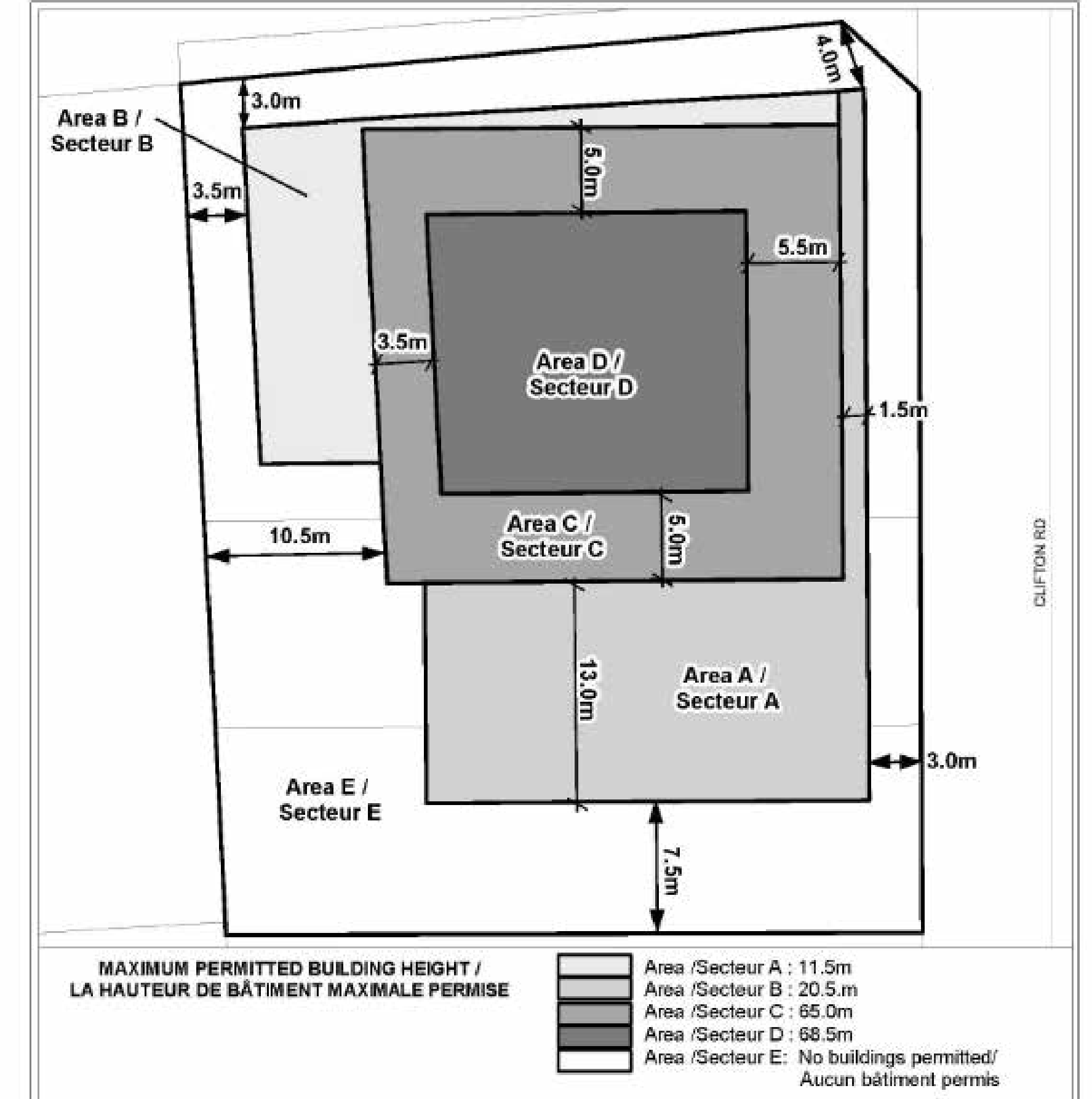
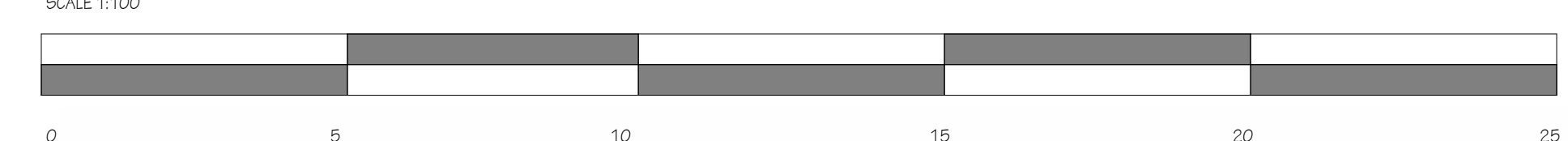


Note all existing site information as per site survey plan dated March 2, 2018 and prepared by STANTEC GEOMATICS Ltd. Ref No: 1818170028-110
 LOTS 24 AND 25 AND PART OF LOTS 46, 47 AND 48 REGISTERED PLAN 360 CITY OF OTTAWA

ZONING TABLE	
Current Zoning	TM22(2011)0400-0
Site Area	2,176.48 m ² 23,427.43 ft ²
Number of Dwelling Units	244 units
Lot Area	N/A
Lot Frontage	N/A
Minimum Lot Width	N/A
Setbacks	Front Yard: REFER TO ZONING ENVELOPE Corner Side Yard: REFER TO ZONING ENVELOPE Interior Side Yard: REFER TO ZONING ENVELOPE Rearyard: REFER TO ZONING ENVELOPE
Maximum Building Height	66.5m - REFER TO ZONING ENVELOPE
Amenity Area	Total (6m ² per dwelling unit): 1,374m ² of which 50% is required to be communal: 687m ²
Percentage of Site Landscaping	30% of site to be landscaped
Parking	Residential: 5 spaces/unit after first 12 Visitors: 1 space/unit after first 12 Minimum Required: Residential No Minimum Visitors: 1 + 25 spaces By-Grade Parking Requirements: Residential: 1.0 spaces/unit
	Private Amenity Space: 1,286.12 m ² Common Amenity Space: 714.00 m ² Total Amenity Space: 2,012.61 m ²
	Landscaped Area = 664.61 m ²
	Total Provided: 87 (0.36 ratio) Residential: 62 spaces (0.25 ratio) Visitors: 25 spaces (0.1 ratio)
	Total Provided: 252 (1.03 ratio) At-Grade: 50 spaces Indoor Vertical: 97 spaces Horizontal/Double-Stacked: 110 spaces

LEGEND:

- 32-Asphalt
- 32-Building Existing
- 32-Building New
- 32-Conc Curb Depressed
- 32-Conc Curb To City of Ottawa Standards SC7
- 32-Concrete
- 32-Concrete Pavers
- 32-Concrete Paver-O2
- 32-Concrete Sidewalk
- 32-Grass
- 32-Mech Grate
- 32-Planting O1
- 32-Planting O2
- 32-Site Utilities
- Herringbone Concrete Reseal Pattern
- 12mm Deep Chevron Traction Grooves 300mm G.C.
- PROPOSED FIRE ROUTE
- ROAD WIDENING EASEMENT
- AREA IMPACTED BY ROAD WIDENING EASEMENT
- DEPRESSED SIDEWALK, CONTINUOUS
- FH
- EXISTING FREE HYDRANT
- EXISTING CATCH BASIN
- NEW CATCH BASIN
- PLANTERS
- HA-PROPERTY LINE
- HA-SITE ASPHALT
- HA-SITE BUILDING ABOVE
- HA-SITE BUILDING BELOW
- HA-SITE BUILDING EXISTING
- HA-SITE BUILDING OUTLINE
- HA-SITE CONC
- HA-SITE CONC CURB DETAIL TO CITY OF OTTAWA STANDARDS
- HA-SITE CONC CURB DEPRESSED TO CITY OF OTTAWA STANDARD SC-7
- HA-SITE CONC CURB TO BE REBUILT
- HA-SITE ELEC
- HA-SITE FENCE
- HA-SITE FURNISHINGS
- HA-SITE MALCH
- HA-SITE NEIGHBOURING LOTS
- HA-SITE PAVERS
- HA-SITE PLANTING
- HA-SITE RETAINING WALL
- HA-SITE SETBACK LINE
- HA-SITE SIDEWALK
- HA-SITE SIDEWALK JOINT
- HA-SITE SOFT LANDSCAPE
- HA-SITE TREES
- HA-SITE UTILITIES
- EXISTING MANHOLE
- FDC
- UP
- EXISTING UTILITY POLE



Ottawa
 D02-03-18-0094 19-0961-D
 M Zoning, By-law/Schedule/s

This is Schedule 400 to Zoning By-law No. 2008-250
 Annexe 400 au Règlement de zonage n° 2008-250

This is Attachment 2 to By-law Number 2019-348, passed October 9, 2019
 Pièce jointe n° 2 du Règlement municipal n° 2019-348, adopté le 9 octobre, 2019

Minimum required setbacks/
 Retraits minimums requis

Minimum required setbacks/
 Retraits minimums requis

Issue	24/07/21	Issued for SPC
Revised		
Revised		

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ALL ERRORS AND/OR OMISSIONS TO THE ARCHITECT.
 ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.
 DO NOT SCALE DRAWINGS.
 COPYRIGHT RESERVED.

Hobin Architecture Incorporated
 63 Pamela Street
 Ottawa, Ontario
 Canada K1S 3K7
 T: 613-238-7200
 F: 613-235-2025
 E: mail@hobinarc.com
 hobinarc.com

HOBIN ARCHITECTURE

PROJECT
 1950 SCOTT STREET

DRAWING TITLE
 SITE PLAN-SPA

DRAWN	DATE	SCALE
FB	07/5/2024	As Indicated

PROJECT
 2129
DRAWING NO.
 SPA -
SCALE
 A1.00
 REVISION NO. 1

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines TIA Screening

1. Description of Proposed Development

Municipal Address	1950 Scott Street & 312-314 Clifton Road
Description of Location	South side of Scott, west side of Clifton
Land Use Classification	High-Rise Multifamily w/ Ground-Floor Retail
Development Size (units)	244 units
Development Size square metre (m ²)	195 m ² (2,098 ft ²) retail
Number of Accesses and Locations	1 (to Clifton)
Phase of Development	1
Buildout Year	2026

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)? ²	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the proposed driveway within auxiliary lanes of an intersection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed driveway make use of an existing median break that serves an existing site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Transportation Impact Assessment Guidelines

	Yes	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the development include a drive-thru facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the development satisfy the Location Trigger?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the development satisfy the Safety Trigger?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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



11

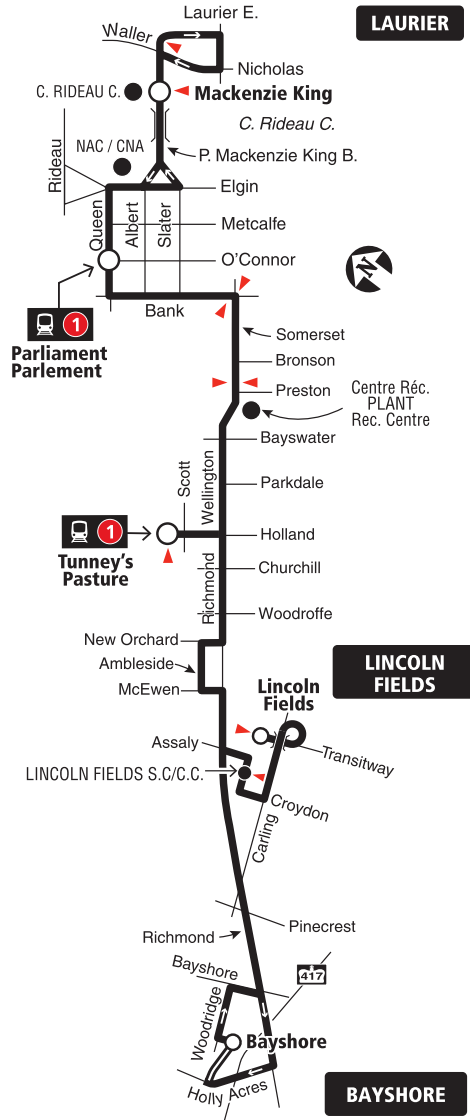
LINCOLN FIELDS BAYSHORE

LAURIER

Fréquent

7 days a week / 7 jours par semaine

All day service
Service toute la journée



Transitway & Station
 Timepoint / Heures de passage

12.2023

12.2023

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

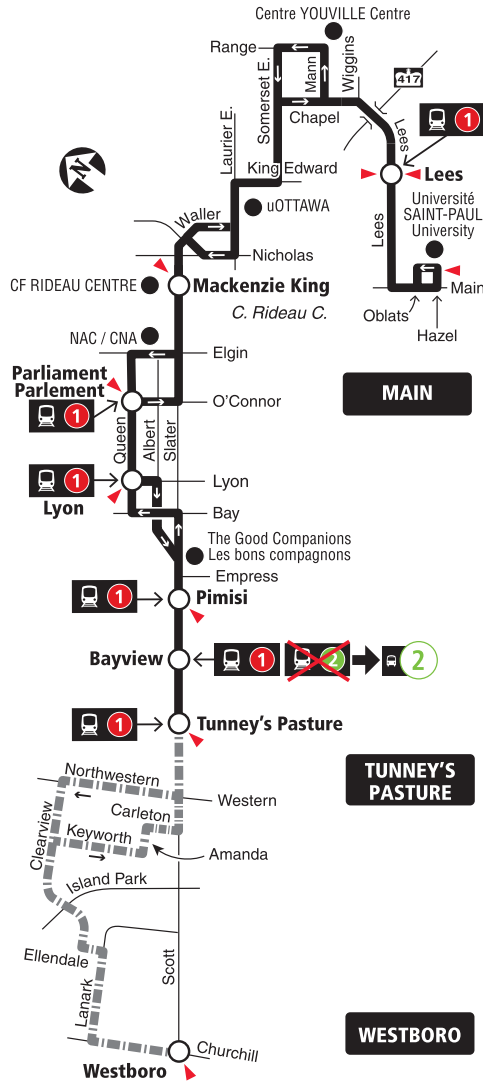
- Customer Service / Service à la clientèle 613-560-5000
- Lost and Found / Objets perdus 613-563-4011
- Security / Sécurité 613-741-2478

Effective December 24, 2023
En vigueur 24 décembre 2023

16

MAIN TUNNEY'S PASTURE WESTBORO

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



- Station
- No Sunday service / Aucun service le dimanche
- Timepoint / Heures de passage

2020.04

Schedule / Horaire..... 613-560-1000
Text / Texto560560
plus your four digit bus stop number / plus votre numéro d'arrêt à quatre chiffres

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

Effective May 3, 2020
En vigueur 3 mai 2020

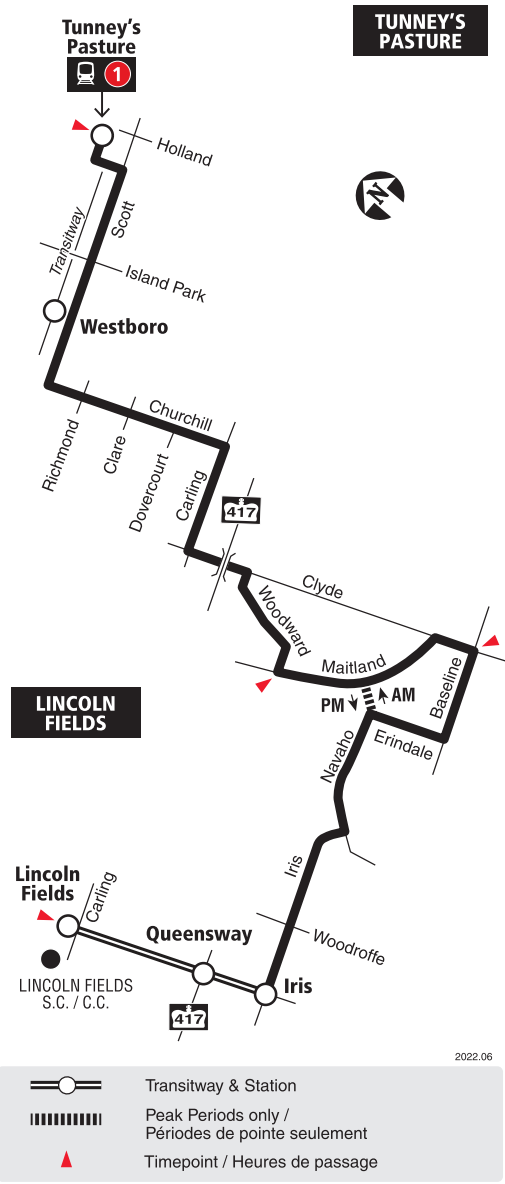


50

LINCOLN FIELDS TUNNEY'S PASTURE

Local

Monday to Saturday / Lundi au samedi
No service Sat. eve. or all day Sunday / Aucun service le soir le sam. ou toute la journée dimanche



2022.06

- Transitway & Station
- Peak Periods only / Périodes de pointe seulement
- Timepoint / Heures de passage

2022.06

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 June 26, 2022
En vigueur 26 juin 2022



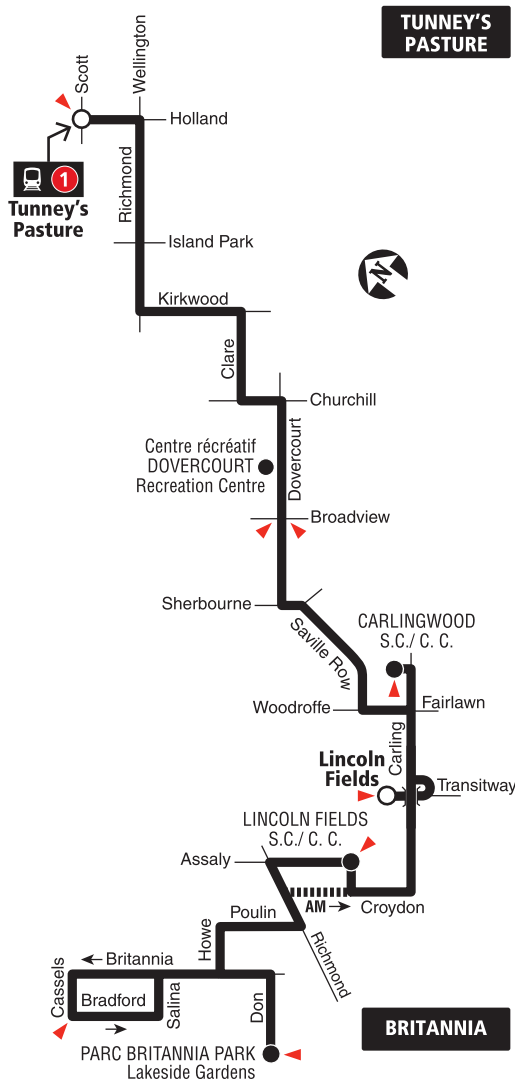
51

BRITANNIA TUNNEY'S PASTURE

Fréquent

7 days a week / 7 jours par semaine

All day service
Service toute la journée



2023.08

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 le 27 août 2023

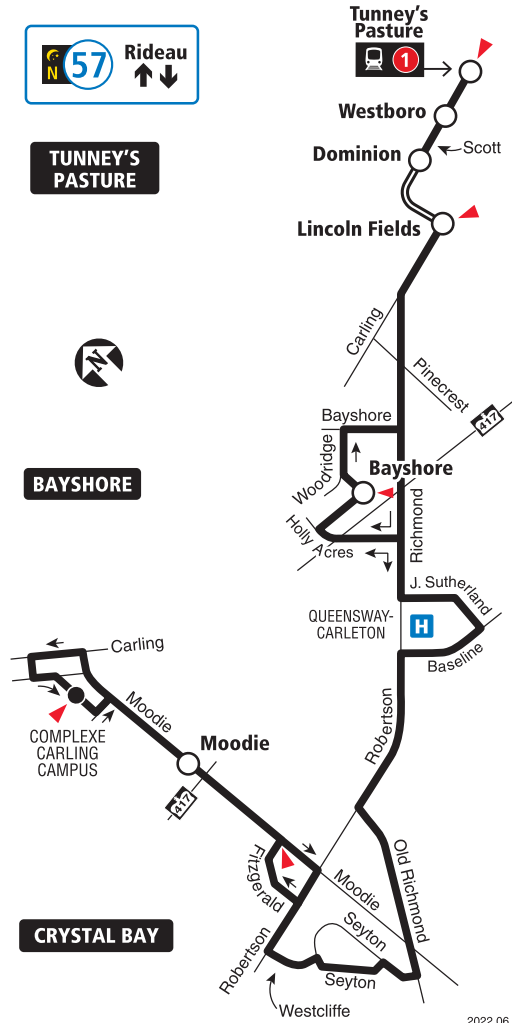


BAYSHORE CRYSTAL BAY TUNNEY'S PASTURE

Rapid^e

7 days a week / 7 jours par semaine

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



Transitway & Station
 Timepoint | Heures de passage

When O-Train Line 1 is not running overnight, Route 57 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 57 sera prolongée au centre-ville jusqu'à la station Rideau.

2022.06

2022.06

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 June 26, 2022
En vigueur 26 juin 2022

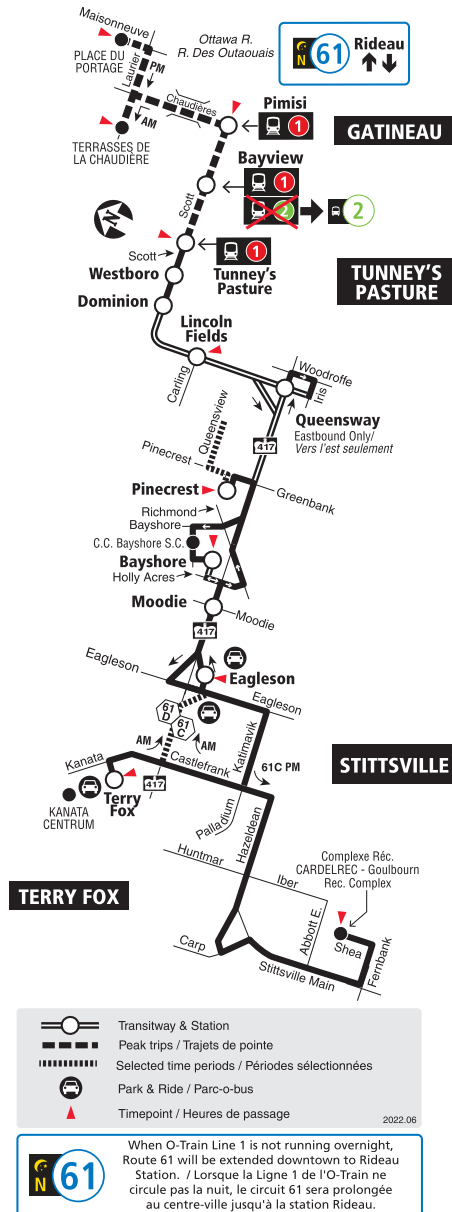


**TERRY FOX
STITTSVILLE**
**TUNNEY'S PASTURE
GATINEAU**

Rapid^e

7 days a week / 7 jours par semaine

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



When O-Train Line 1 is not running overnight, Route 61 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 61 sera prolongée au centre-ville jusqu'à la station Rideau.

2022.06

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 June 26, 2022
En vigueur 26 juin 2022

OC Transpo INFO 613-560-5000
octranspo.com

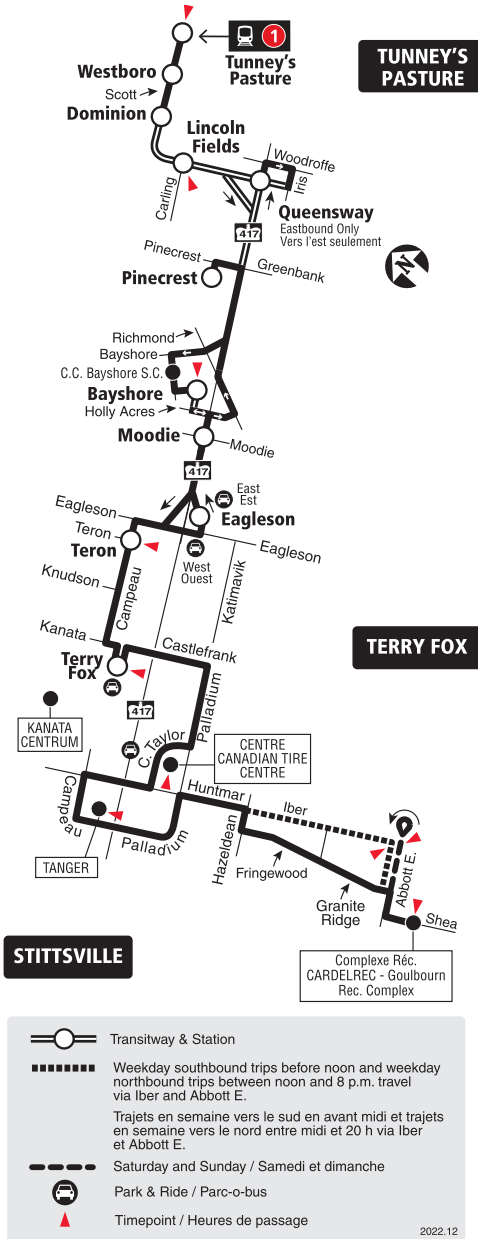


**TERRY FOX
STITTSVILLE
TUNNEY'S PASTURE**



7 days a week / 7 jours par semaine

All day service
Service toute la journée



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**

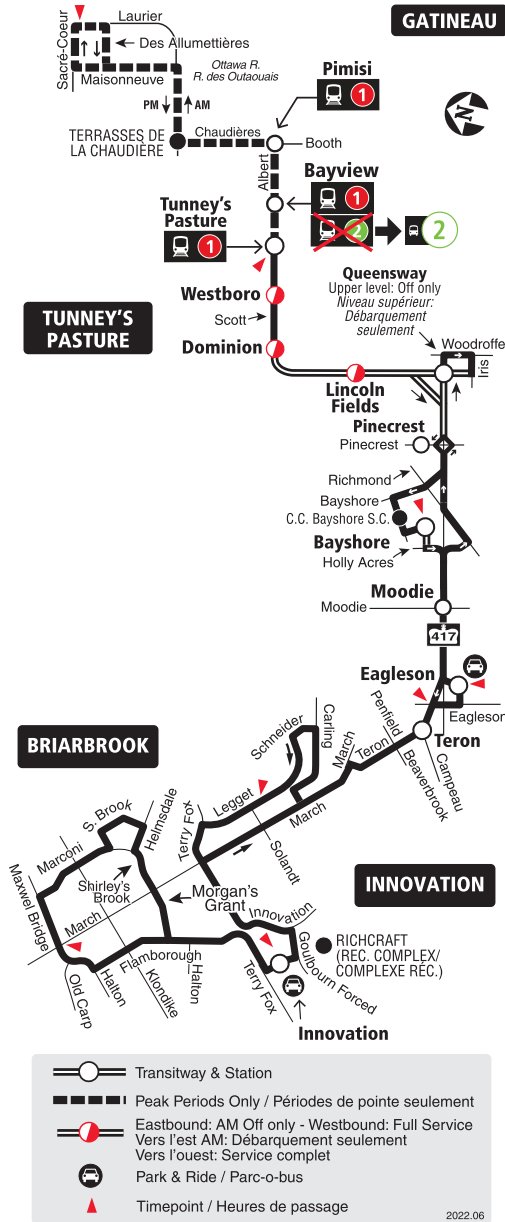
Effective December 25, 2022
En vigueur 25 décembre 2022

OC Transpo INFO 613-560-5000
 octranspo.com



**INNOVATION
BRIARBROOK
TUNNEY'S PASTURE
GATINEAU**

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



2022.06

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 June 26, 2022
En vigueur 26 juin 2022

OC Transpo INFO 613-560-5000
 octranspo.com



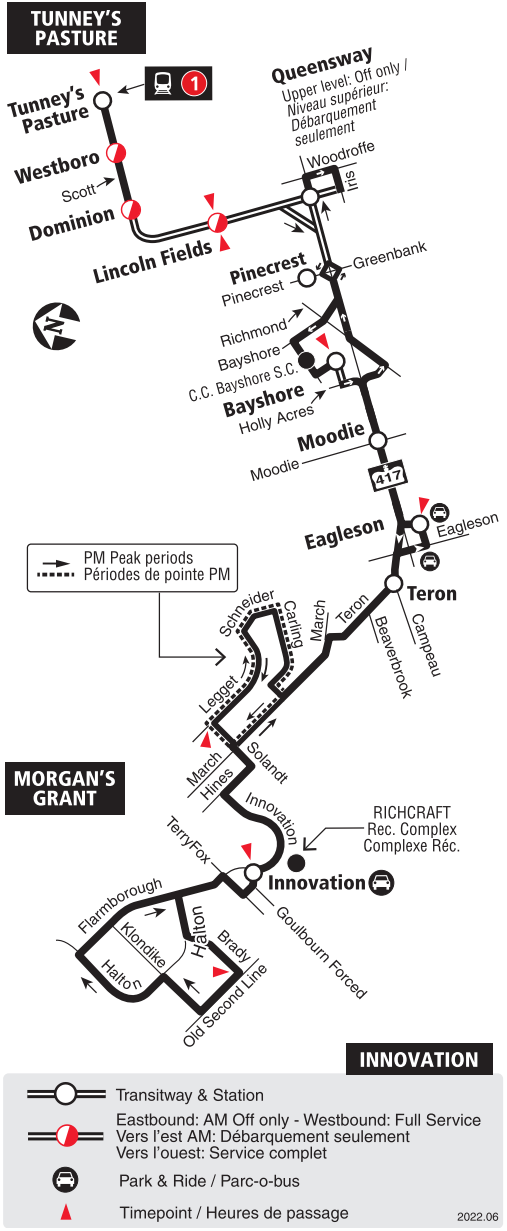
64

MORGAN'S GRANT INNOVATION TUNNEY'S PASTURE

Local

Monday to Friday / Lundi au vendredi

All day service
Service toute la journée



2022.06

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 June 26, 2022
En vigueur 26 juin 2022



66

KANATA TUNNEY'S PASTURE GATINEAU

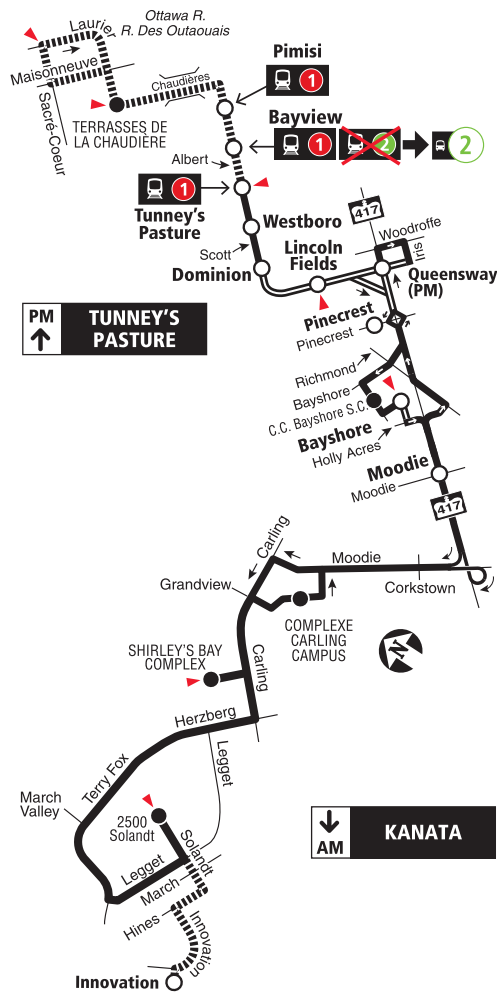
Local

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement

PM
↑
GATINEAU



PM
↑
TUNNEY'S
PASTURE

↓
AM
KANATA

- Transitway & Station
- Some trips / Quelques trajets
- Timepoint / Heures de passage

2022.06

2022.06

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 June 26, 2022
En vigueur 26 juin 2022



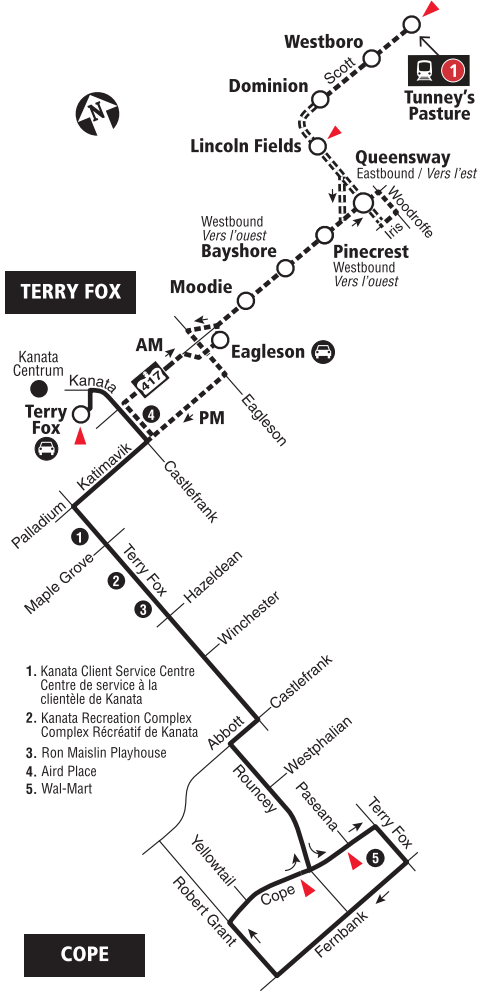
67

COPE TUNNEY'S PASTURE TERRY FOX

Local

Monday to Friday / lundi au vendredi
All day service
Service toute la journée

TUNNEY'S PASTURE



TERRY FOX

- 1. Kanata Client Service Centre
Centre de service à la clientèle de Kanata
- 2. Kanata Recreation Complex
Complex Récréatif de Kanata
- 3. Ron Maislin Playhouse
- 4. Aird Place
- 5. Wal-Mart

COPE

- Transitway & Station
- Peak Periods Only / Périodes de pointe seulement
- Park & Ride / Parc-o-bus
- Timepoint / Heures de passage

2022.05

2022.06

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 June 26, 2022
En vigueur 26 juin 2022**

73

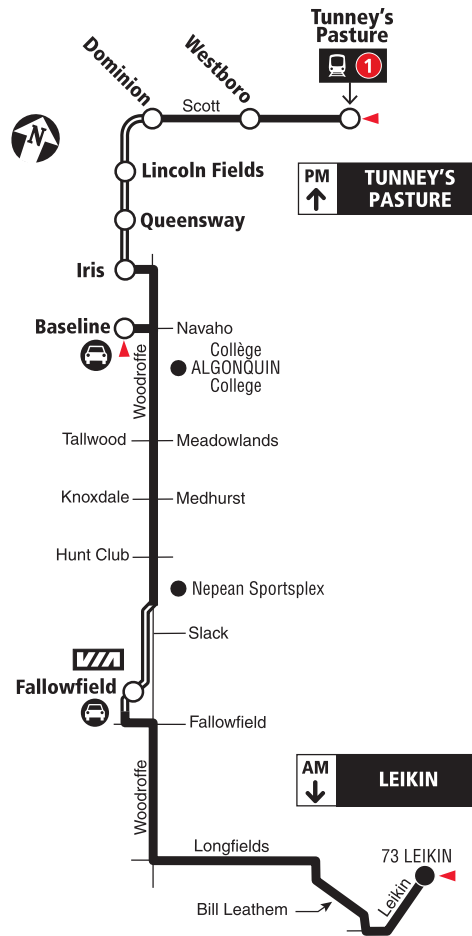
LEIKIN TUNNEY'S PASTURE

Local

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



2022.06

-  Transitway & Station
-  Park & Ride / Parc-o-bus
-  Timepoint / Heures de passage

2022.06

 **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 June 26, 2022

En vigueur 26 juin 2022

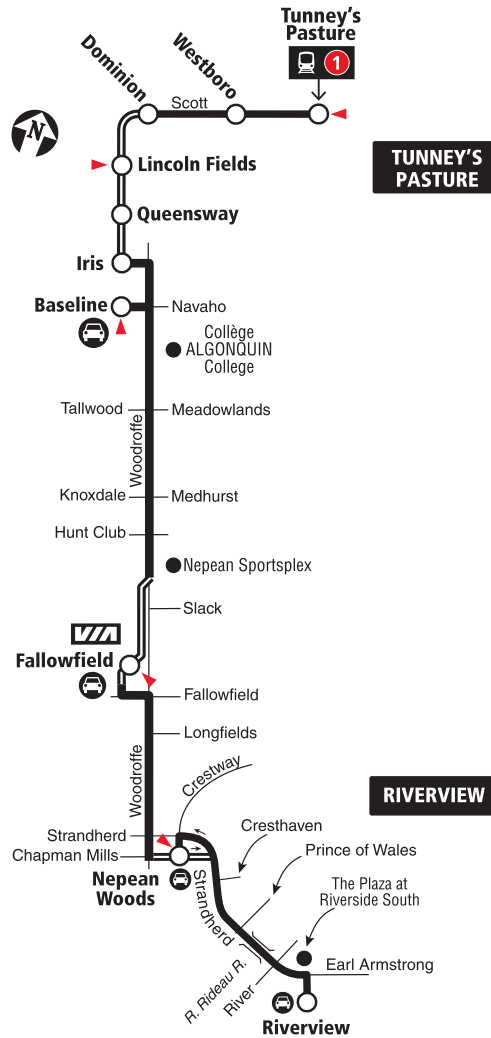


**RIVERVIEW
TUNNEY'S PASTURE**



7 days a week / 7 jours par semaine

All day service
Service toute la journée



Transitway & Station
 Park & Ride / Parc relais
 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**

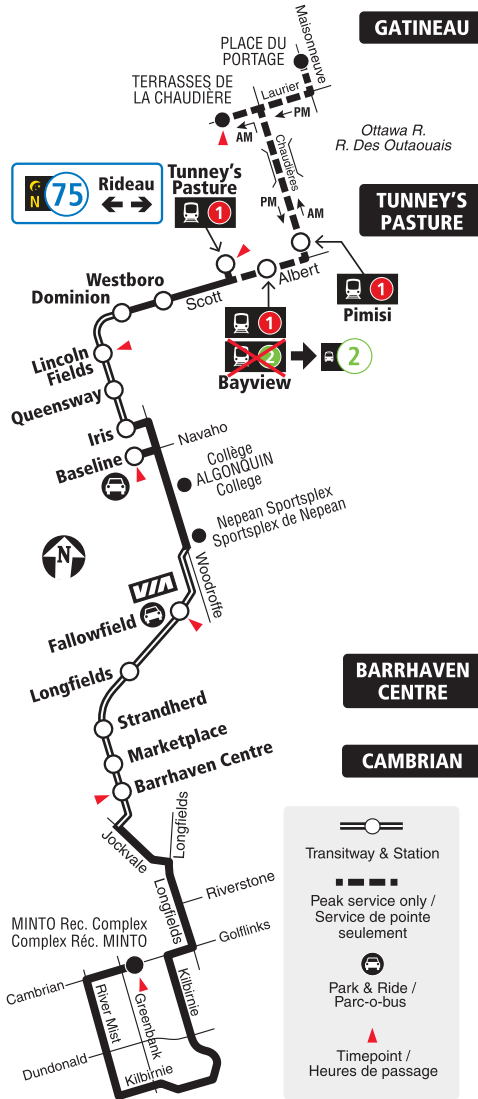
Effective August 27, 2023
En vigueur 27 août 2023

INFO 613-560-5000
octranspo.com



**CAMBRIAN
BARRHAVEN C.
TUNNEY'S PASTURE
GATINEAU**

7 days a week / 7 jours par semaine
All day service and limited overnight
Service toute la journée et limité la nuit



2022.06
 When O-Train Line 1 is not running overnight, Route 75 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 75 sera prolongée au centre-ville jusqu'à la station Rideau.

2022.06

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 June 26, 2022
En vigueur 26 juin 2022

INFO 613-560-5000
octranspo.com



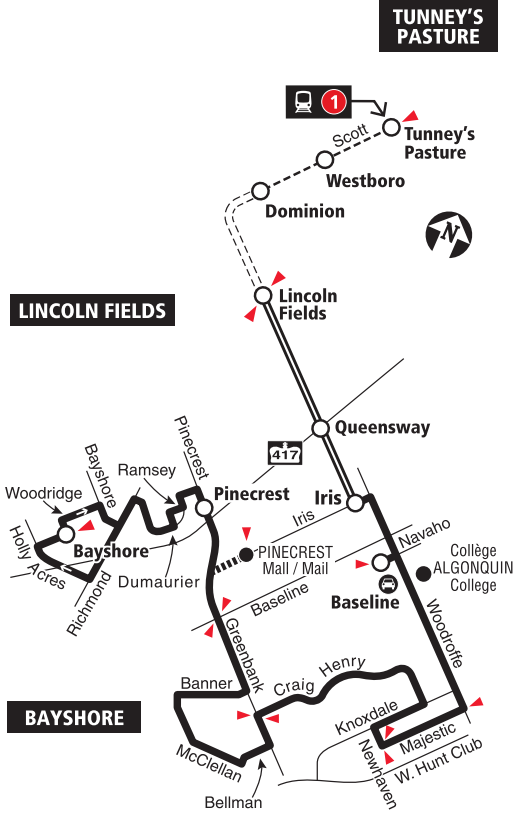
82

BAYSHORE LINCOLN FIELDS TUNNEY'S PASTURE

Local

7 days a week / 7 jours par semaine

All day service
Service toute la journée



2022.06

- Transitway & Station
- Transitway & Station (Peak periods / périodes de pointe)
- Peak periods / périodes de pointe
- Park & Ride / Parc-o-bus
- Timepoint / Heures de passage

2022.06

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 June 26, 2022
En vigueur 26 juin 2022

INFO 613-560-5000
octranspo.com



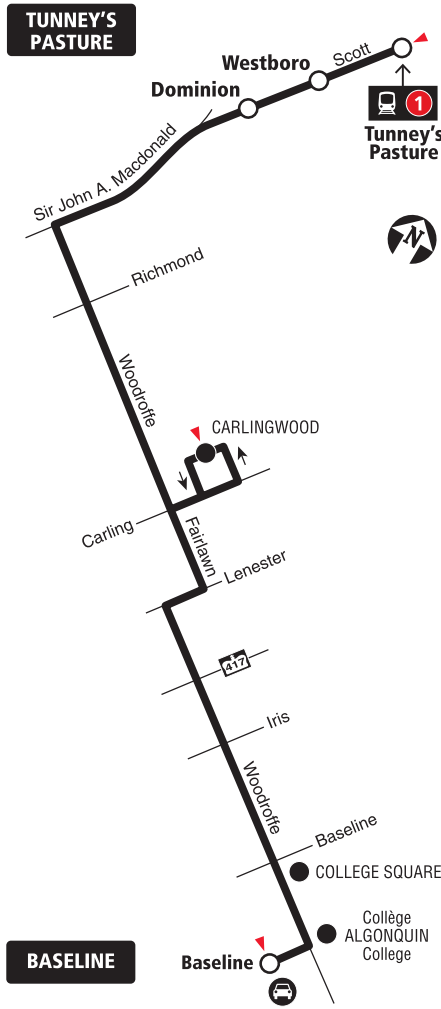
87

BASELINE TUNNEY'S PASTURE

Fréquent

7 days a week / 7 jours par semaine

All day service
Service toute la journée



2022.06

	Transitway & Station
	Park & Ride / Parc-o-bus
	Timepoint / Heures de passage

2022.06

Schedule / Horaire.....613-560-1000
Text / Texto560560
plus your four digit bus stop number / plus votre numéro d'arrêt à quatre chiffres

Customer Service
 Service à la clientèle **613-560-5000**
 Lost and Found / Objets perdus..... **613-563-4011**
 Security / Sécurité **613-741-2478**

**Effective June 26, 2022
En vigueur 26 juin 2022**



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LINCOLN FIELDS TUNNEY'S PASTURE CARLINGWOOD

Local

7 days a week / 7 jours par semaine

Selected time periods only
Périodes sélectionnées seulement



12.2022

- Station
- Some trips / Quelques trajets
- Timepoint / Heures de passage

12.2022

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 December 18, 2022
En vigueur 18 décembre 2022



252

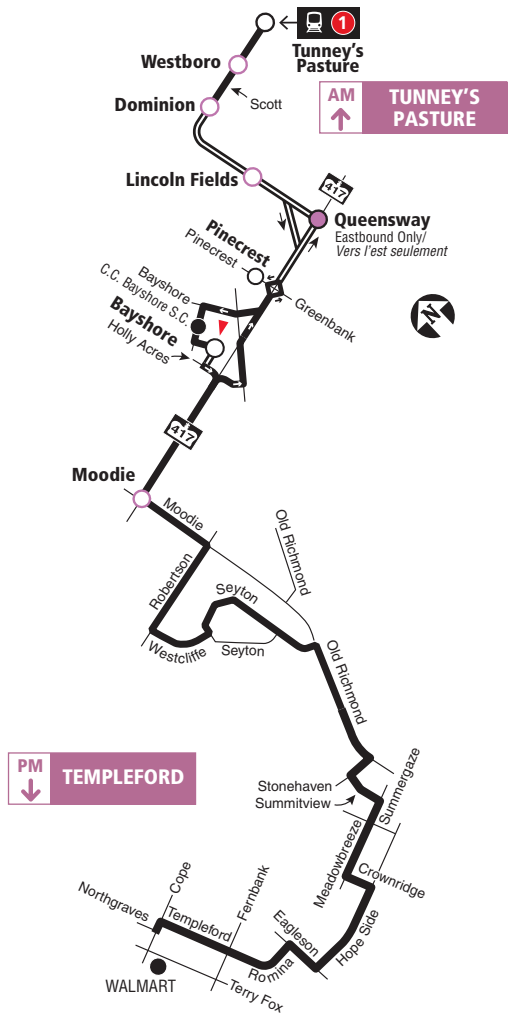
TUNNEY'S PASTURE TEMPLEFORD

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seul. / aucun arrêt en PM
- AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet

2022.06

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 June 26, 2022
En vigueur 26 juin 2022



256

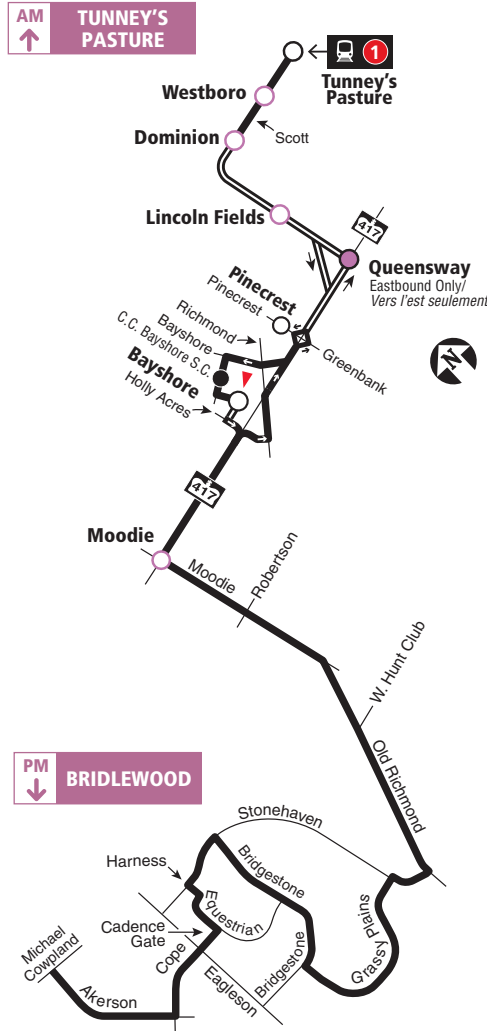
BRIDLEWOOD TUNNEY'S PASTURE

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seulement / aucun arrêt en PM
- AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet

2022.06

2022.06

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 June 26, 2022
En vigueur 26 juin 2022



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octranspo.com



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BRIDLEWOOD TUNNEY'S PASTURE

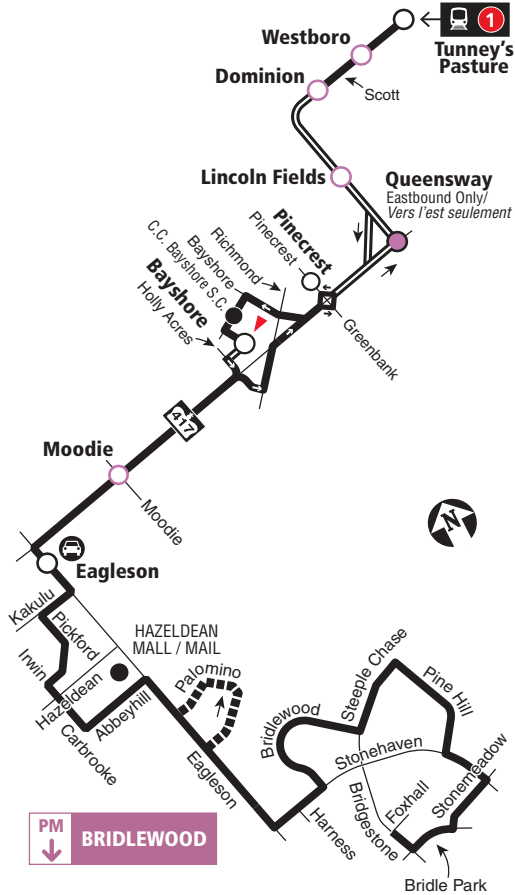
Connexion

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement

AM
↑
TUNNEY'S PASTURE



PM
↓
BRIDLEWOOD

2022.06

- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seulement / aucun arrêt en PM
- AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet
- Limited service (AM only)
Service limité (AM seulement)
- Park & Ride / Parc-o-bus

2022.06

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 June 26, 2022
En vigueur 26 juin 2022



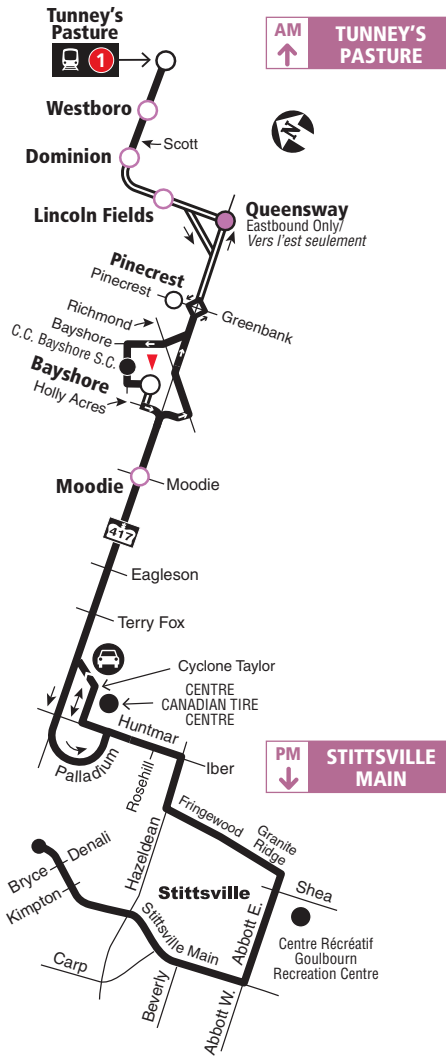
261

STITTSVILLE MAIN TUNNEY'S PASTURE

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



2022.06

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 June 26, 2022
En vigueur 26 juin 2022

OC Transpo INFO 613-560-5000
 octranspo.com

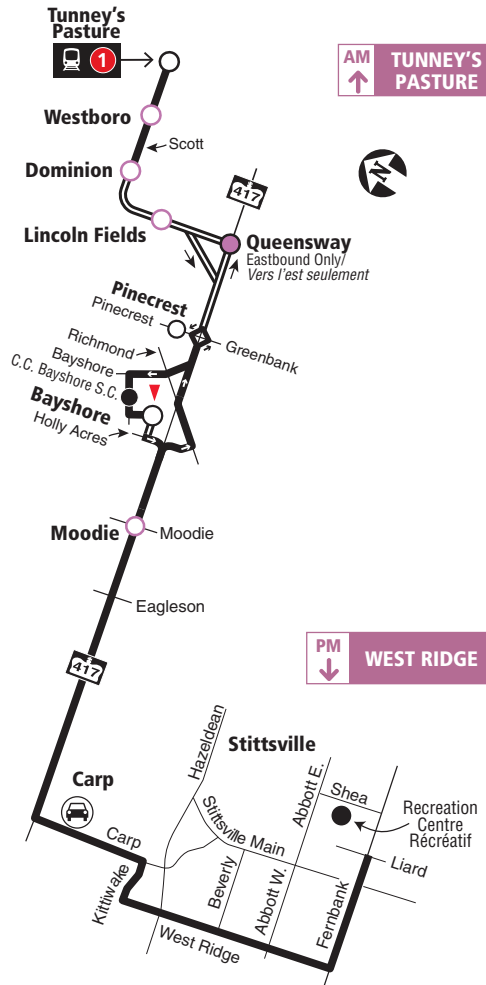
262





WEST RIDGE TUNNEY'S PASTURE

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



-  Transitway & Station
-  Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seul. / aucun arrêt en PM
-  AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet
-  Park & Ride / Parc-o-bus

2022.06



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 June 26, 2022

En vigueur 26 juin 2022



INFO 613-560-5000
octranspo.com



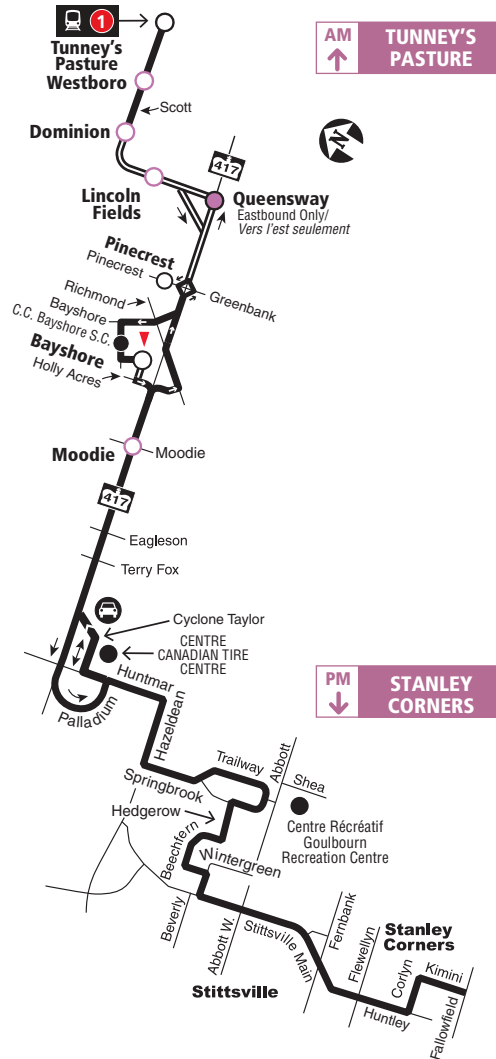
263

STANLEY CORNERS TUNNEY'S PASTURE

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



2022.06

- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seul. / aucun arrêt en PM
- AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet
- Park & Ride / Parc-o-bus

2022.06



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 June 26, 2022

En vigueur 26 juin 2022



INFO 613-560-5000
octranspo.com



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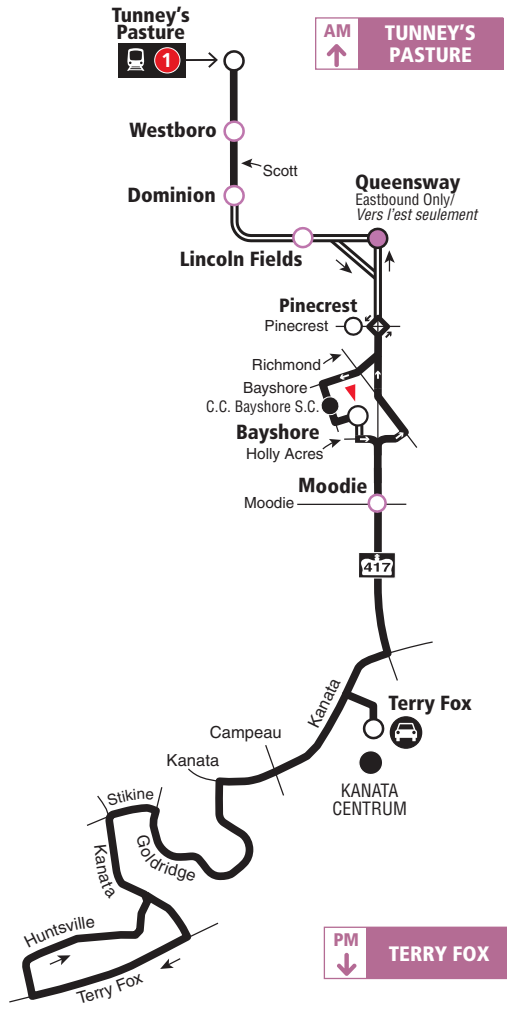
TERRY FOX TUNNEY'S PASTURE

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



2022.06

- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seul. / aucun arrêt en PM
- AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet
- Park & Ride / Parc-o-bus

2022.06

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 June 26, 2022
En vigueur 26 juin 2022



265

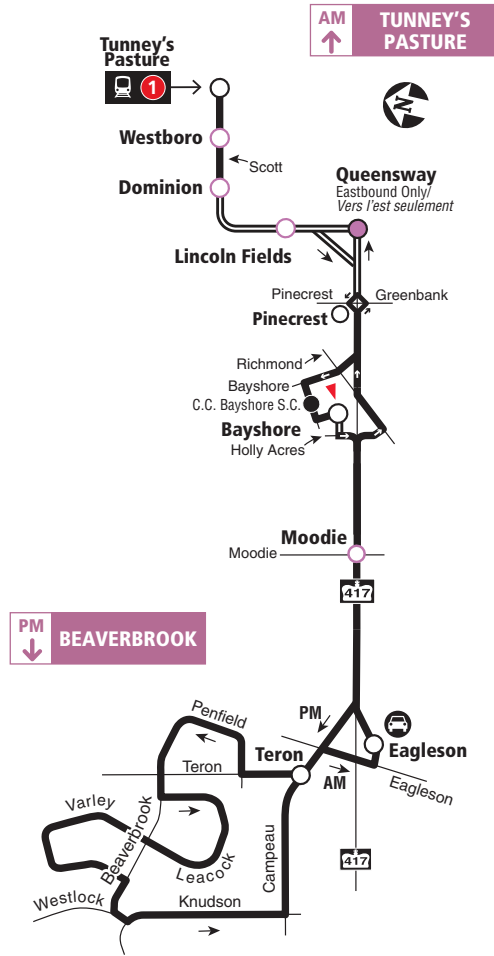
BEAVERBROOK TUNNEY'S PASTURE

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



PM
↓
BEAVERBROOK

AM
↑
TUNNEY'S PASTURE

2022.06

- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seul. / aucun arrêt en PM
- AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet
- Park & Ride / Parc-o-bus

2022.06

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 June 26, 2022
En vigueur 26 juin 2022



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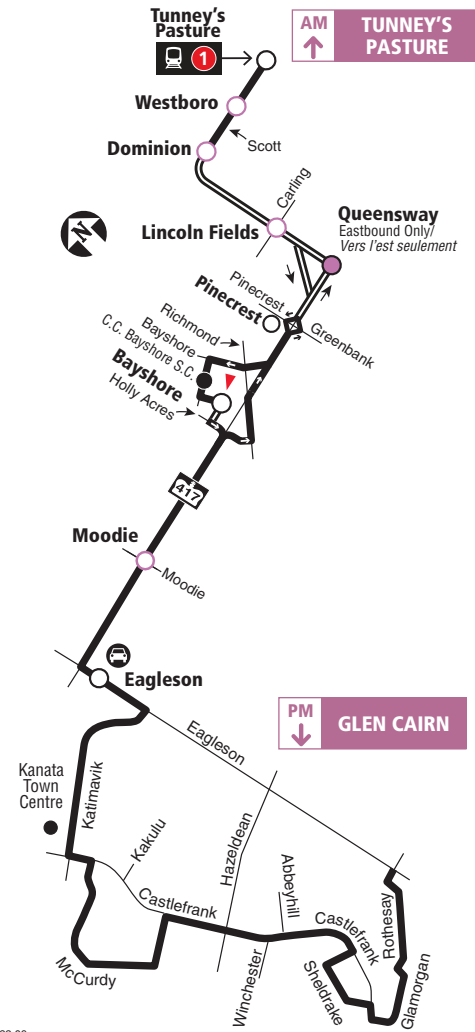
GLEN CAIRN TUNNEY'S PASTURE

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



2022.06

- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seul. / aucun arrêt en PM
- AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet
- Park & Ride / Parc-o-bus

2022.06

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 June 26, 2022
En vigueur 26 juin 2022



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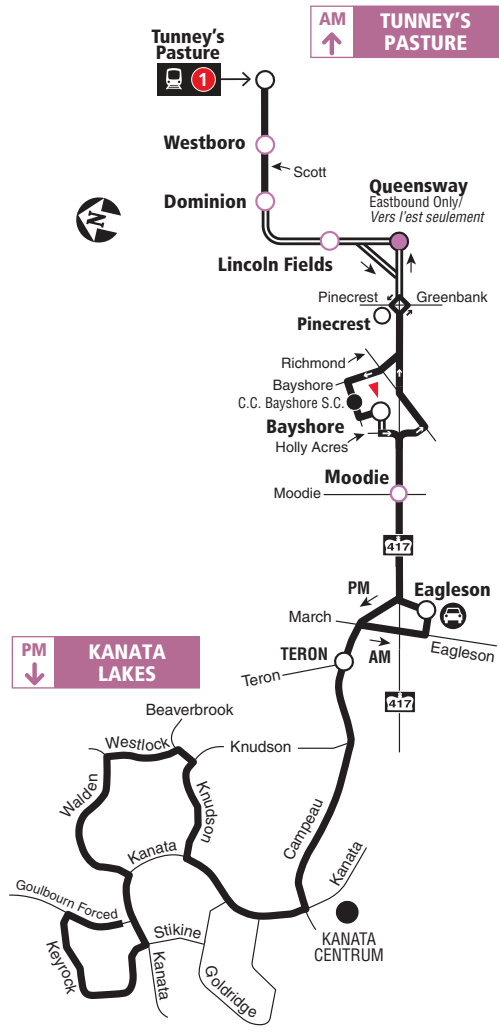
KANATA LAKES TUNNEY'S PASTURE

Connexion

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



PM
↓
KANATA LAKES

AM
↑
TUNNEY'S PASTURE

- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seul. / aucun arrêt en PM
- AM: Off only - PM: Full Service
AM : débarquement seul. - PM : service complet
- Park & Ride / Parc-o-bus

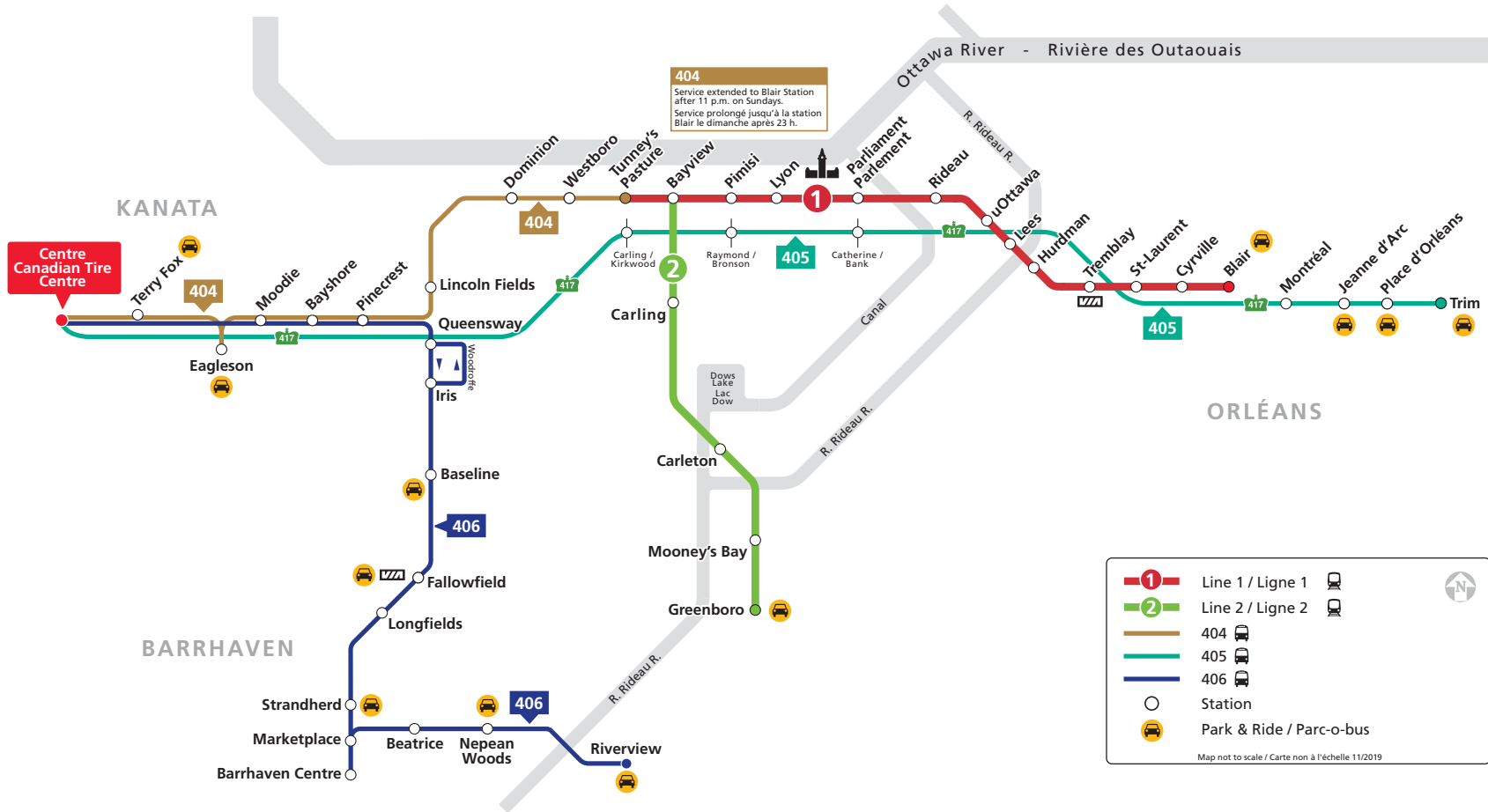
2022.06

2022.06

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 June 26, 2022
En vigueur 26 juin 2022

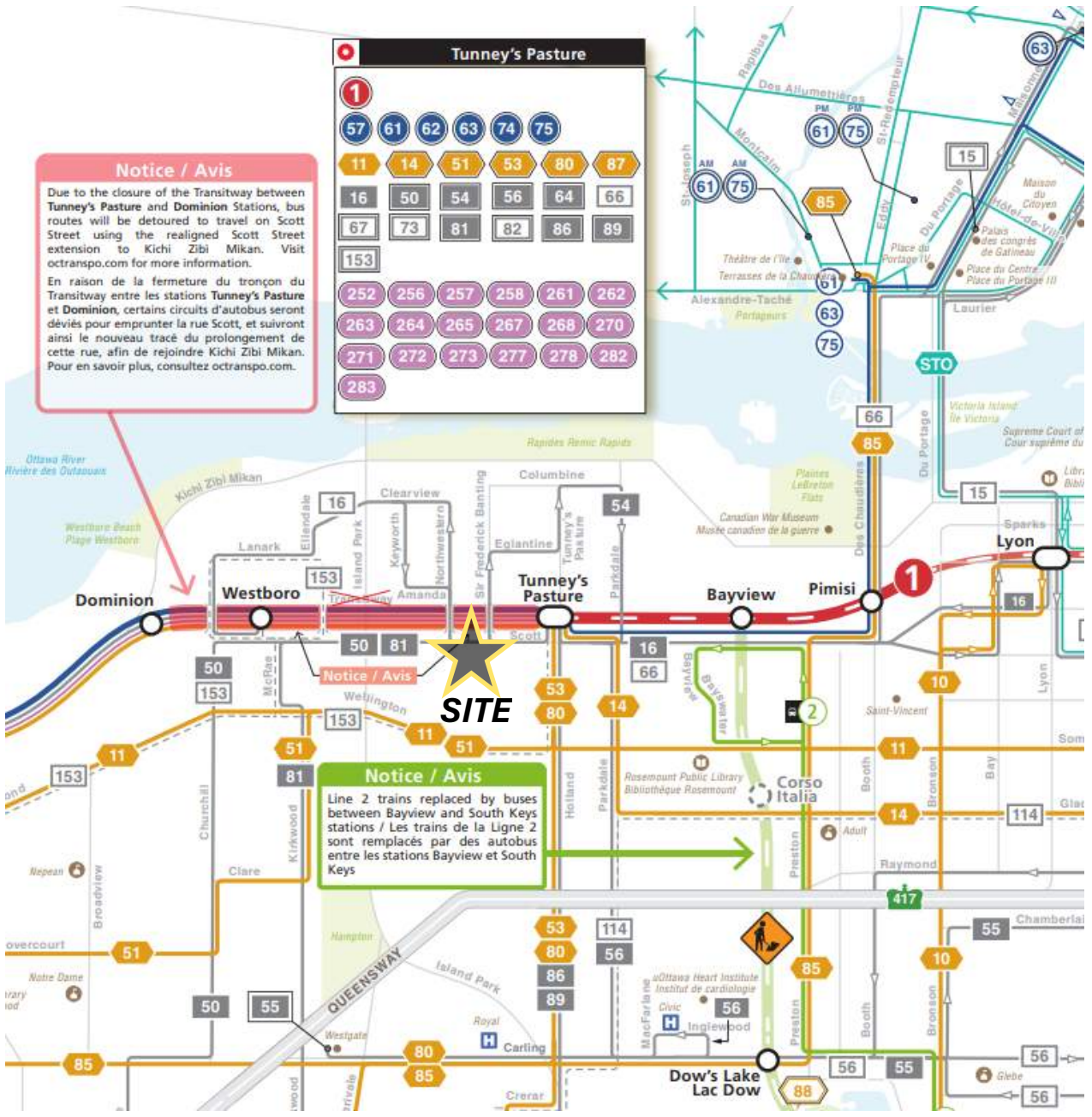


Notice / Avis

Due to the closure of the Transitway between Tunney's Pasture and Dominion Stations, bus routes will be detoured to travel on Scott Street using the realigned Scott Street extension to Kichi Zibi Mikan. Visit octranspo.com for more information.

En raison de la fermeture du tronçon du Transitway entre les stations Tunney's Pasture et Dominion, certains circuits d'autobus seront déviés pour emprunter la rue Scott, et suivront ainsi le nouveau tracé du prolongement de cette rue, afin de rejoindre Kichi Zibi Mikan. Pour en savoir plus, consultez octranspo.com.

Tunney's Pasture						
1	57	61	62	63	74	75
11	14	51	53	80	87	
16	50	54	56	64	66	
67	73	81	82	86	89	
153						
252	256	257	258	261	262	
263	264	265	267	268	270	
271	272	273	277	278	282	
283						

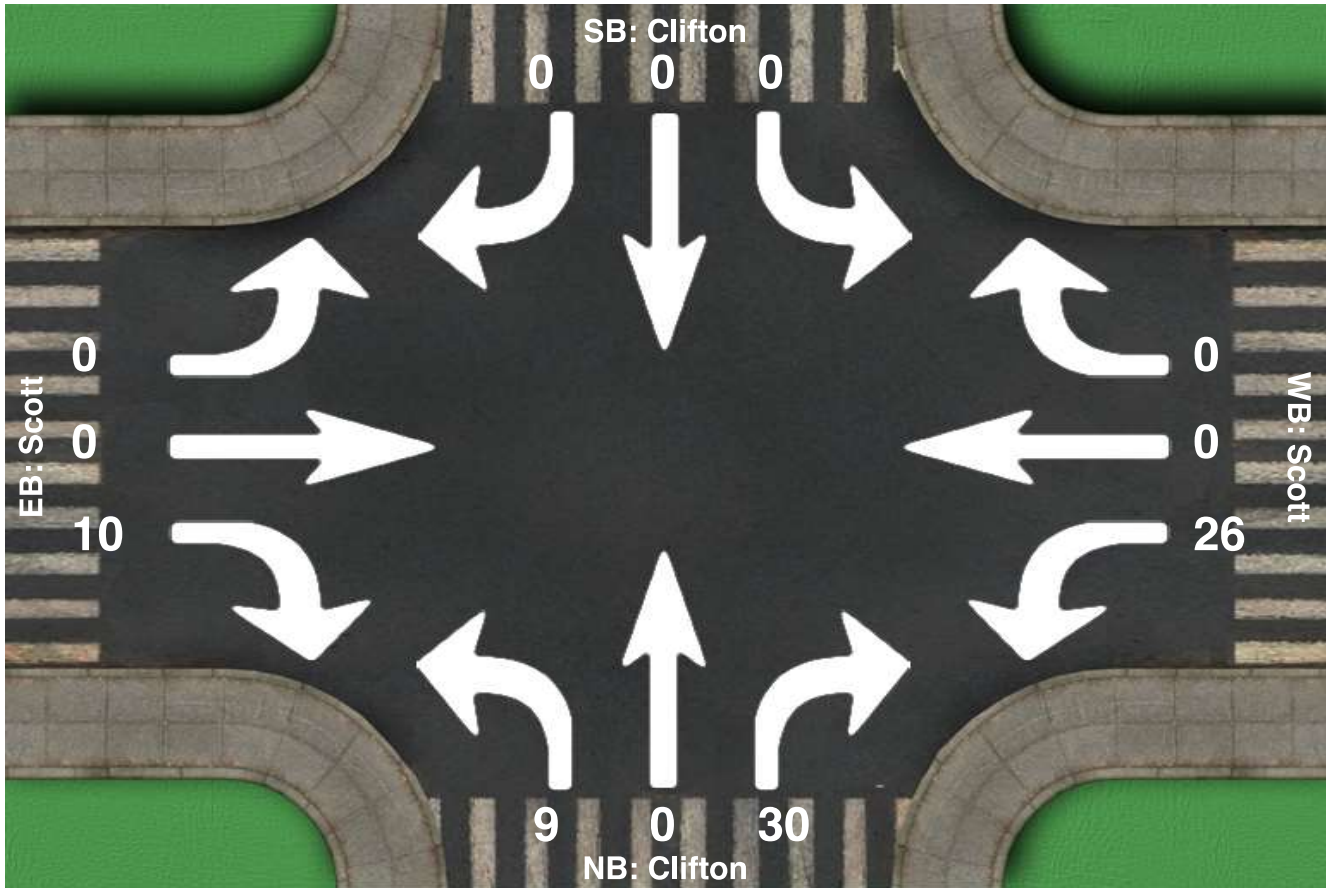


APPENDIX D

Traffic Count Data

Intersection Peak Hour

Location: Clifton at Scott, Ottawa
GPS Coordinates:
Date: 2018-05-24
Day of week: Thursday
Weather: Sunny
Analyst: Rani Nahas



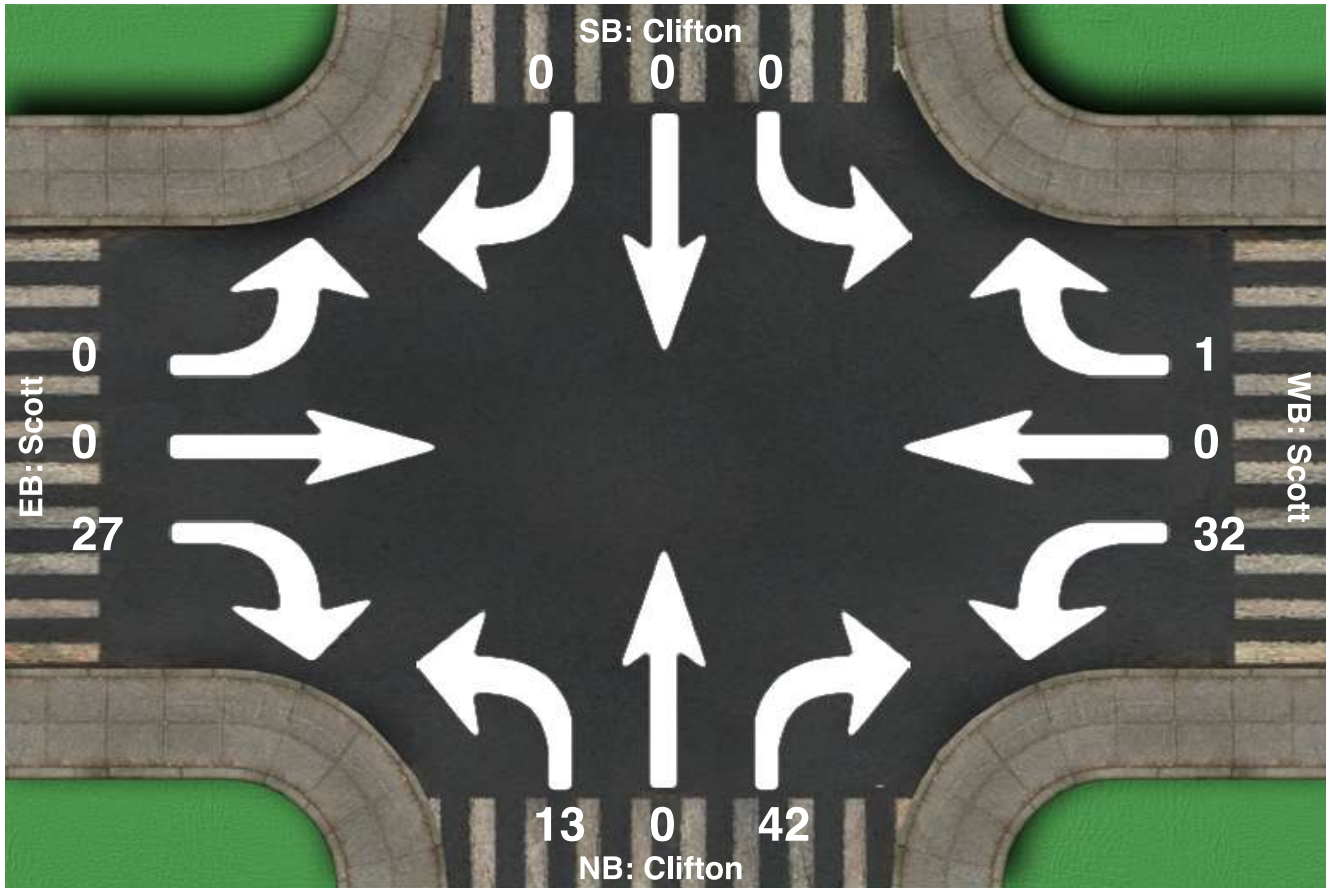
Intersection Peak Hour

08:00 - 09:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	26	0	0	9	0	30	0	0	10	75
Factor	0.00	0.00	0.00	0.72	0.00	0.00	0.56	0.00	0.54	0.00	0.00	0.50	0.78
Approach Factor	0.00			0.72			0.54			0.50			

Intersection Peak Hour

Location: Clifton at Scott, Ottawa
GPS Coordinates:
Date: 2018-05-24
Day of week: Thursday
Weather: Sunny
Analyst: Rani Nahas



Intersection Peak Hour

16:30 - 17:30

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	32	0	1	13	0	42	0	0	27	115
Factor	0.00	0.00	0.00	0.80	0.00	0.25	0.46	0.00	0.81	0.00	0.00	0.75	0.74
Approach Factor	0.00			0.82			0.69			0.75			

Turning Movement Count - Peak Hour Diagram

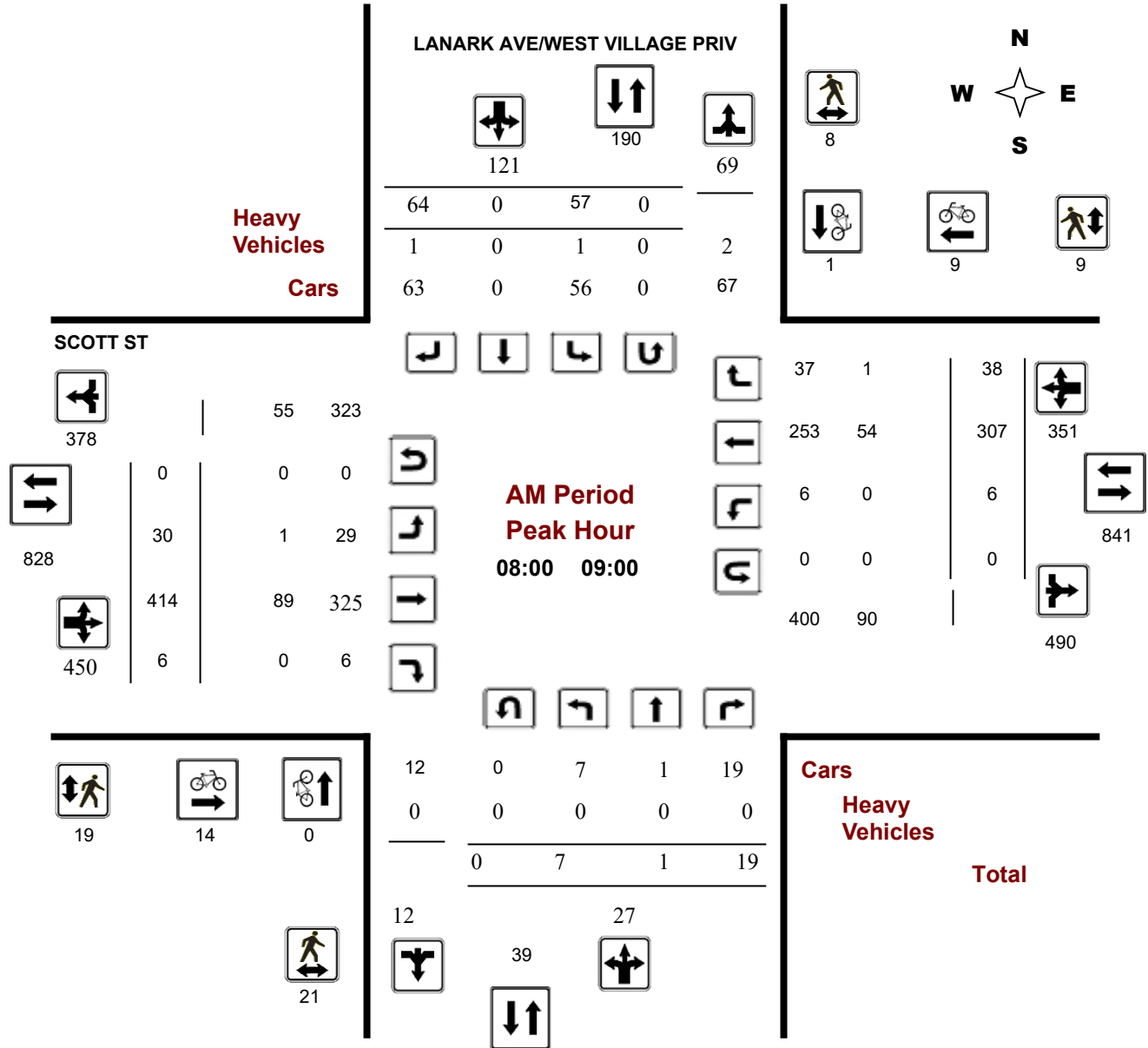
LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

Start Time: 07:00

WO No: 41268

Device: Miovision



Turning Movement Count - Peak Hour Diagram

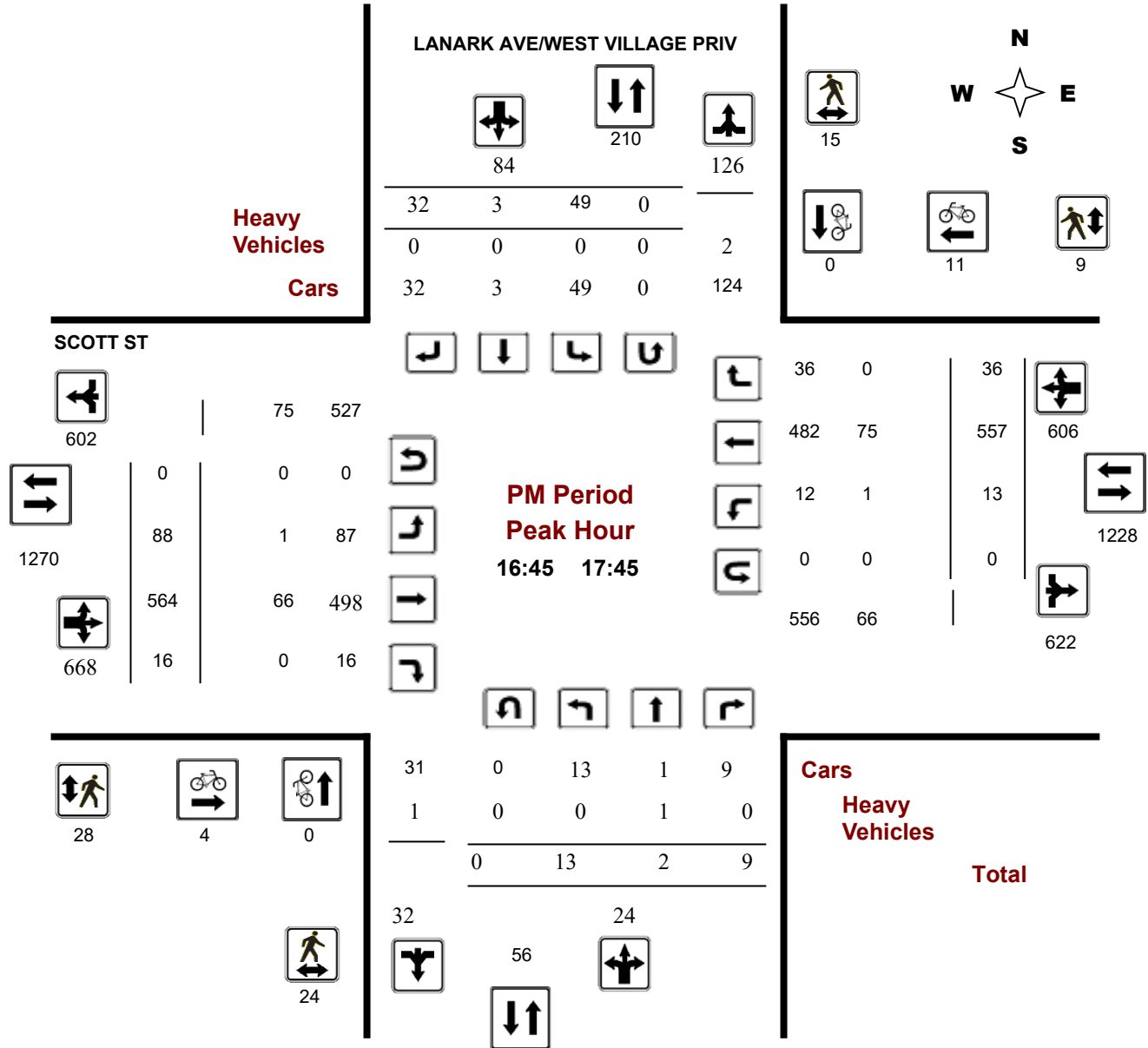
LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

Start Time: 07:00

WO No: 41268

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, November 30, 2023

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 0
 Eastbound: 1 Westbound: 1
 .90

LANARK AVE/WEST VILLAGE PRIV

SCOTT ST

Period	Northbound					Southbound					Eastbound					Westbound					Grand Total	
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	STR TOT	LT	ST	RT	WB TOT	STR TOT		
07:00 08:00	11	0	10	21	142	50	0	71	121	142	17	283	1	301	567	5	249	12	266	567	709	
08:00 09:00	7	1	19	27	148	57	0	64	121	148	30	414	6	450	801	6	307	38	351	801	949	
09:00 10:00	12	0	8	20	106	40	0	46	86	106	27	296	5	328	653	9	297	19	325	653	759	
11:30 12:30	4	0	8	12	120	55	0	53	108	120	43	321	9	373	760	2	349	36	387	760	880	
12:30 13:30	4	1	4	9	93	36	1	47	84	93	56	329	9	394	729	6	292	37	335	729	822	
15:00 16:00	9	7	18	34	144	62	2	46	110	144	82	517	11	610	1134	12	476	36	524	1134	1278	
16:00 17:00	11	2	11	24	111	49	3	35	87	111	90	478	13	581	1164	13	540	30	583	1164	1275	
17:00 18:00	18	1	6	25	106	39	2	40	81	106	86	538	21	645	1324	10	525	38	573	1218	1324	
Sub Total	76	12	84	172	970	388	8	402	798	970	431	3176	75	3682	7026	63	3035	246	3344	7026	7996	
U Turns	0				0		0		0		1		1		2		2		2		2	
Total	76	12	84	172	970	388	8	402	798	970	431	3176	75	3683	7028	63	3035	246	3345	7028	7998	

EQ 12Hr 106 17 117 239 539 11 559 1109 1348 599 4415 104 5119 88 4219 342 4650 9769 11117
 Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

AVG 12Hr 95 15 105 215 485 13 659 998 1213 539 3974 94 4607 79 3797 308 4185 8792 10005
 Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **.90**

AVG 24Hr 124 20 138 282 635 17 863 1307 1589 706 5206 123 6035 103 4974 403 5482 11518 13107
 Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor. **1.31**

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

APPENDIX E

Collision Records



Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CLIFTON RD @ SCOTT ST

Traffic Control: Stop sign

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-04, Wed,15:45	Snow	Angle	P.D. only	Loose snow	North	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-08, Thu,08:08	Clear	Angle	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Traffic Control: Traffic signal

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Jun-06, Sat, 15:42	Clear	Turning movement	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	0
					East	Turning left	Pick-up truck	Cyclist	
2021-May-06, Thu, 13:30	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	0
					North	Turning right	Passenger van	Cyclist	



Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: SCOTT ST btwn CLIFTON RD & LANARK AVE

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Nov-18, Mon, 16:42	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CLIFTON RD btwn SCOTT ST & WILBER AVE

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Sep-06, Mon,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0

APPENDIX F

Long-Range Model Snapshots

TRANS Regional Model

Version 2.15 - Assigned Oct, 2021

AM Peak Hour Total Traffic Volume

Westboro

2011 Model - Basecase

N/A

User Initials: TIMW

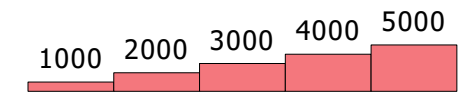
Plot Prepared: Oct, 2021

EMME Scenario: 21713

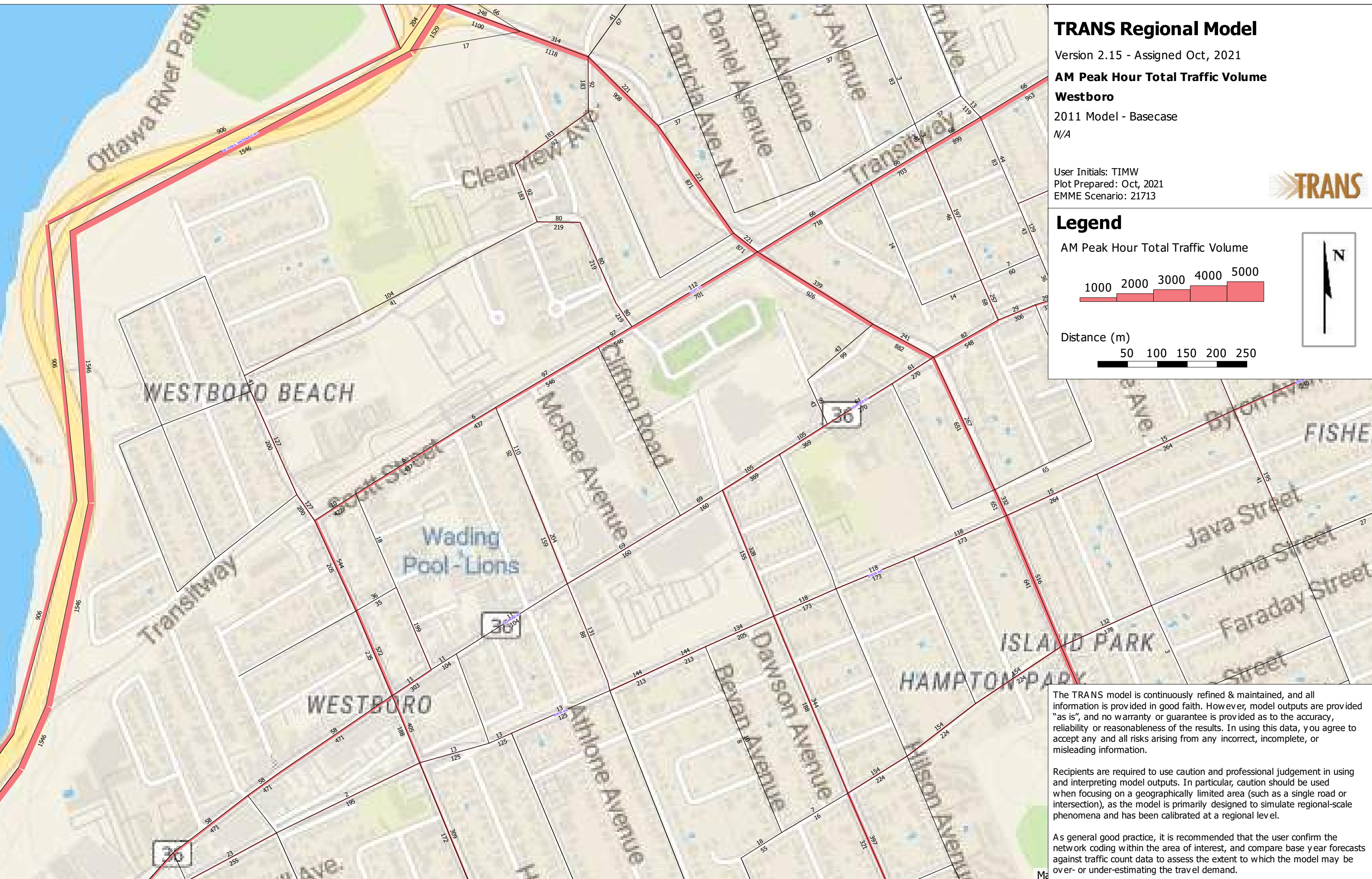
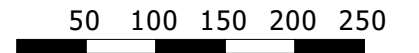


Legend

AM Peak Hour Total Traffic Volume



Distance (m)



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

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

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

TRANS Regional Model

Version 2.15 - Assigned Oct, 2021

AM Peak Hour Total Traffic Volume

Westboro

2031 Model - Basecase

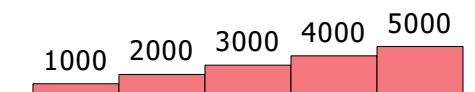
N/A

User Initials: TIMW
Plot Prepared: Oct, 2021
EMME Scenario: 23711

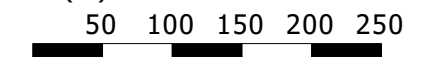


Legend

AM Peak Hour Total Traffic Volume



Distance (m)



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

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

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

APPENDIX G

Other Area Developments

1 Screening

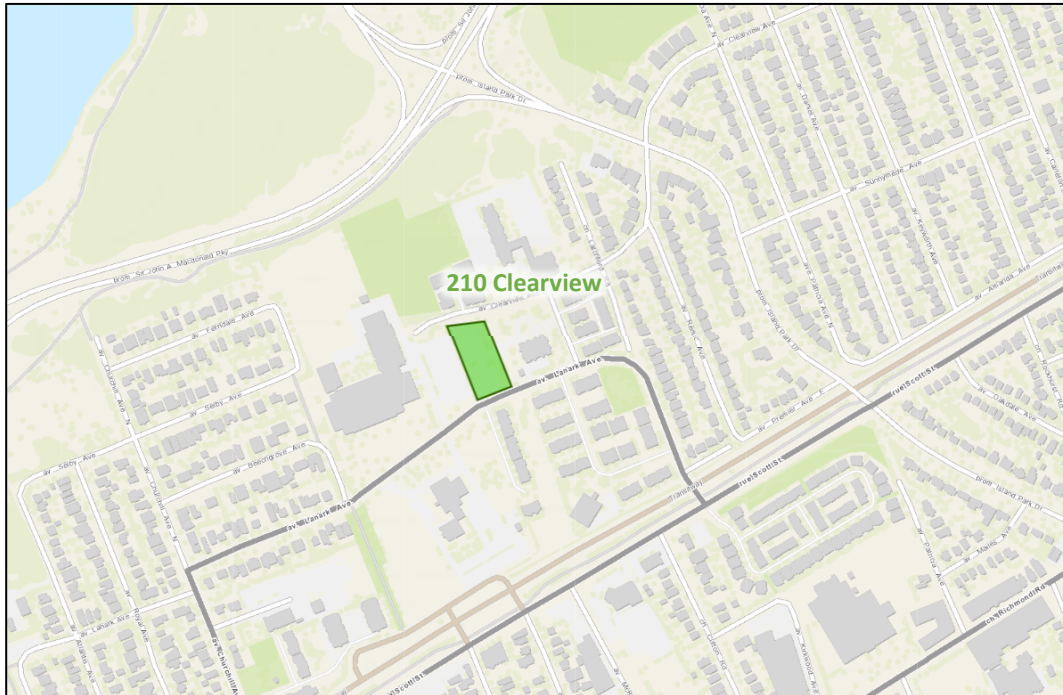
This study has been prepared according to the City of Ottawa’s 2017 Transportation Impact Assessment (TIA) Guidelines. Accordingly, a Step 1 Screening Form has been prepared and is included as Appendix A, along with the Certification Form for the TIA Study PM. As shown in the Screening Form, a TIA is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

2 Existing and Planned Conditions

2.1 Proposed Development

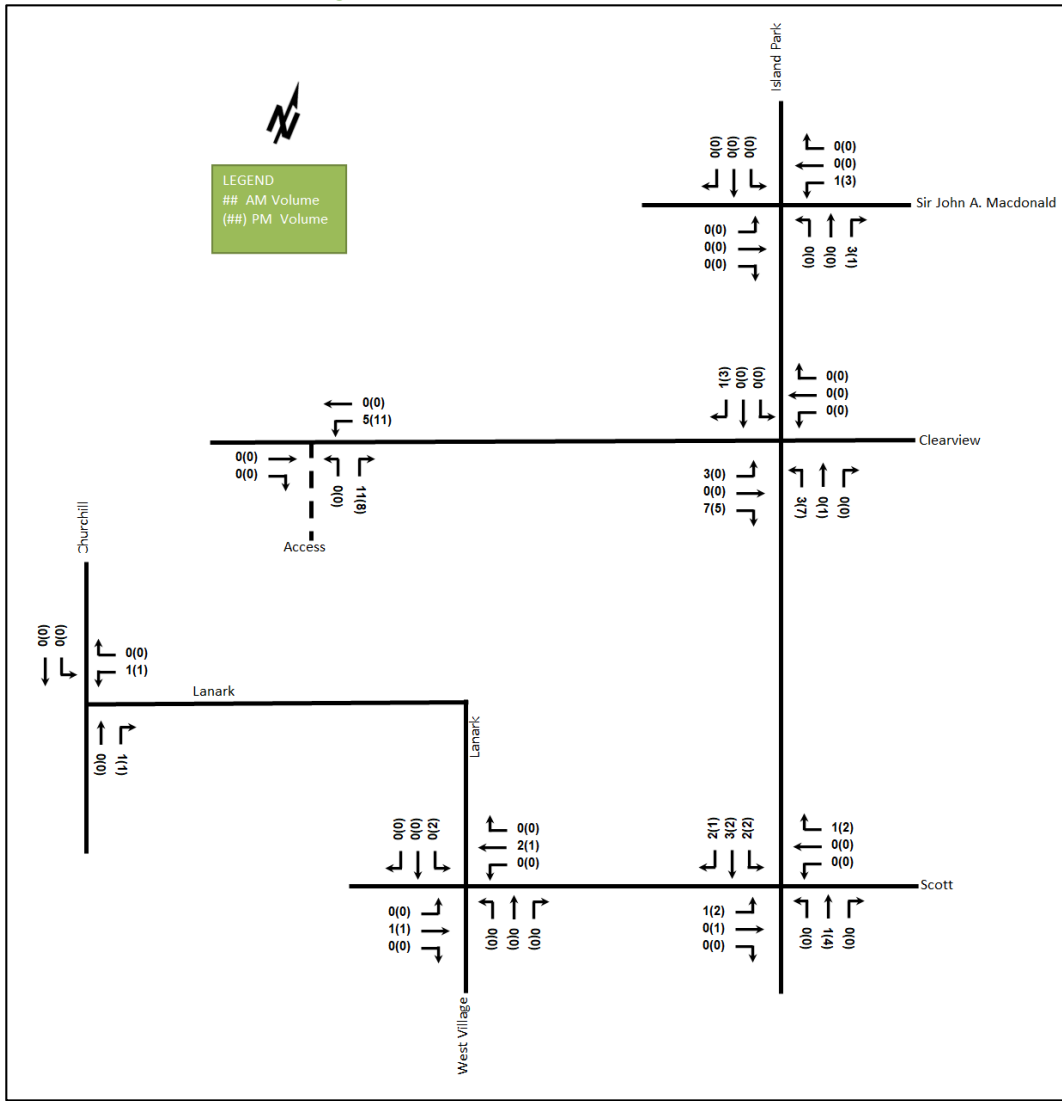
The existing site, located at 200 Clearview Avenue, is planned to redevelop the existing surface parking lot. Approximately 90 existing surface parking spaces will be replaced with the two-level underground parking. The proposed development address will become 210 Clearview Avenue. The existing 26-storey apartment building will remain on the east side of the proposed development and the proposed building will consist of a four-storey podium and 25-storey tower with a total of 177 apartment units. A total of 213 underground vehicle parking spaces and 169 underground bike parking spaces are proposed. The existing surface parking lot accesses will be converted to an access to the underground parking from Clearview Avenue and access to the loading area from Lanark Avenue. An access is proposed to connect Lanark Avenue and Ellendale Crescent for the existing 26-storey apartment building on the east side of the proposed development. The site will also connect through the existing site to Ellendale Crescent. The front entrance will be located on Lanark Avenue. The anticipated full build-out and occupancy horizon is 2027 with construction occurring in a single phase. The site is zoned as Residential Fifth Density Zone (R5C H(28) S216). The site is located within Richmond Road/Westboro secondary plan and Richmond Road/Westboro community design plan areas. Figure 1 illustrates the study area context. Figure 2 illustrates the proposed concept plan.

Figure 1: Area Context Plan



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: July 5, 2022

Figure 12: New Site Generation Auto Volumes



6 Background Network Travel Demands

6.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3 and have been incorporated into the road network analysis.

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 14 and the TRANS model plots are provided in Appendix G.

1.0 SCREENING

1.1 Introduction

This Transportation Impact Assessment (TIA) report has been prepared in support of Official Plan Amendment and Zoning By-law Amendment applications for 335 Roosevelt Avenue.

The subject site is surrounded by the following:

- A Multi-Use Pathway (MUP) and the OC Transpo East-West Transitway to the north;
- Wilmont Avenue and low density residential development to the south;
- A high density residential apartment building to the east; and
- Roosevelt Avenue and low density residential development to the west.

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

The site currently has gated accesses at Roosevelt Avenue and at Wilmont Avenue, restricting local traffic from shortcutting between Richmond Road and Churchill Avenue.

Figure 1: View of the Subject Site

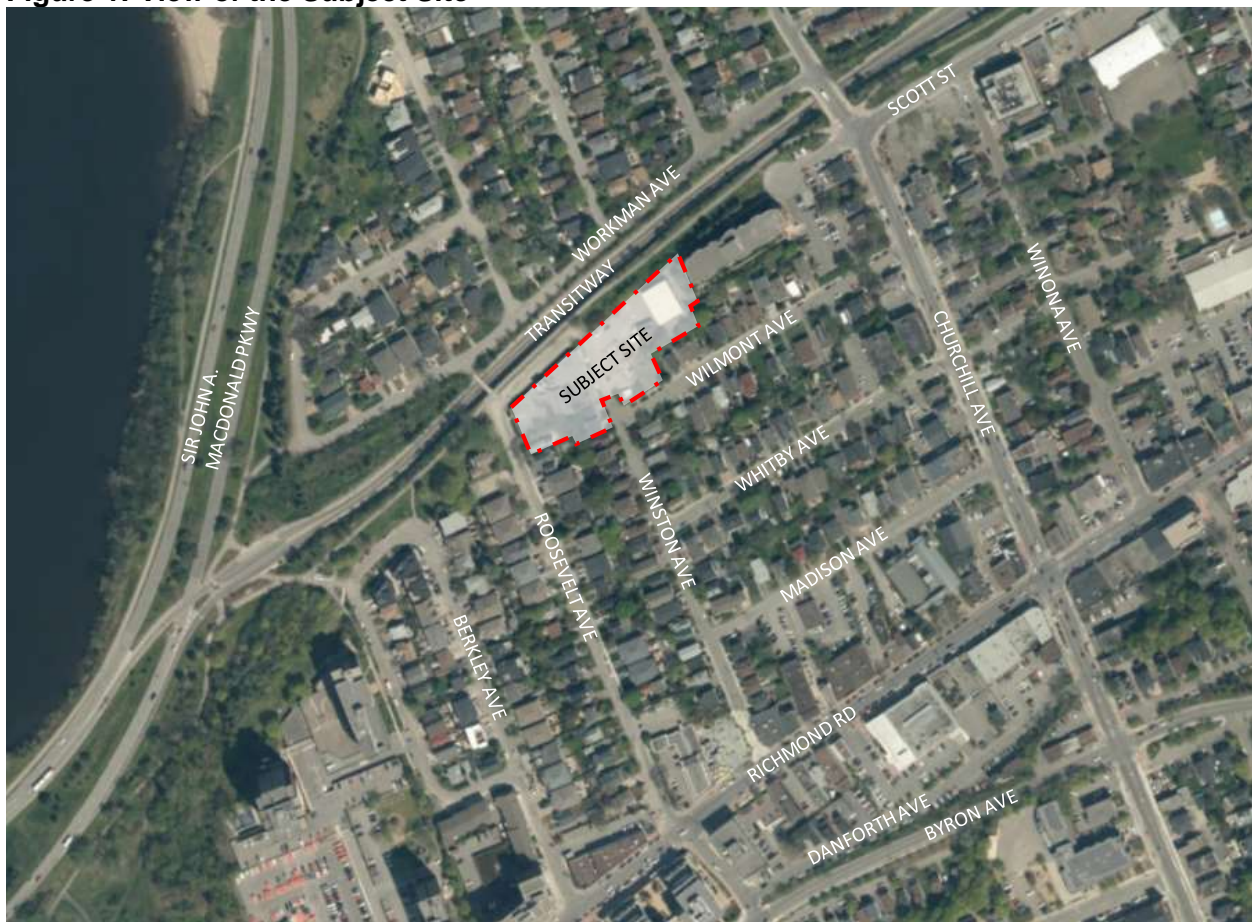
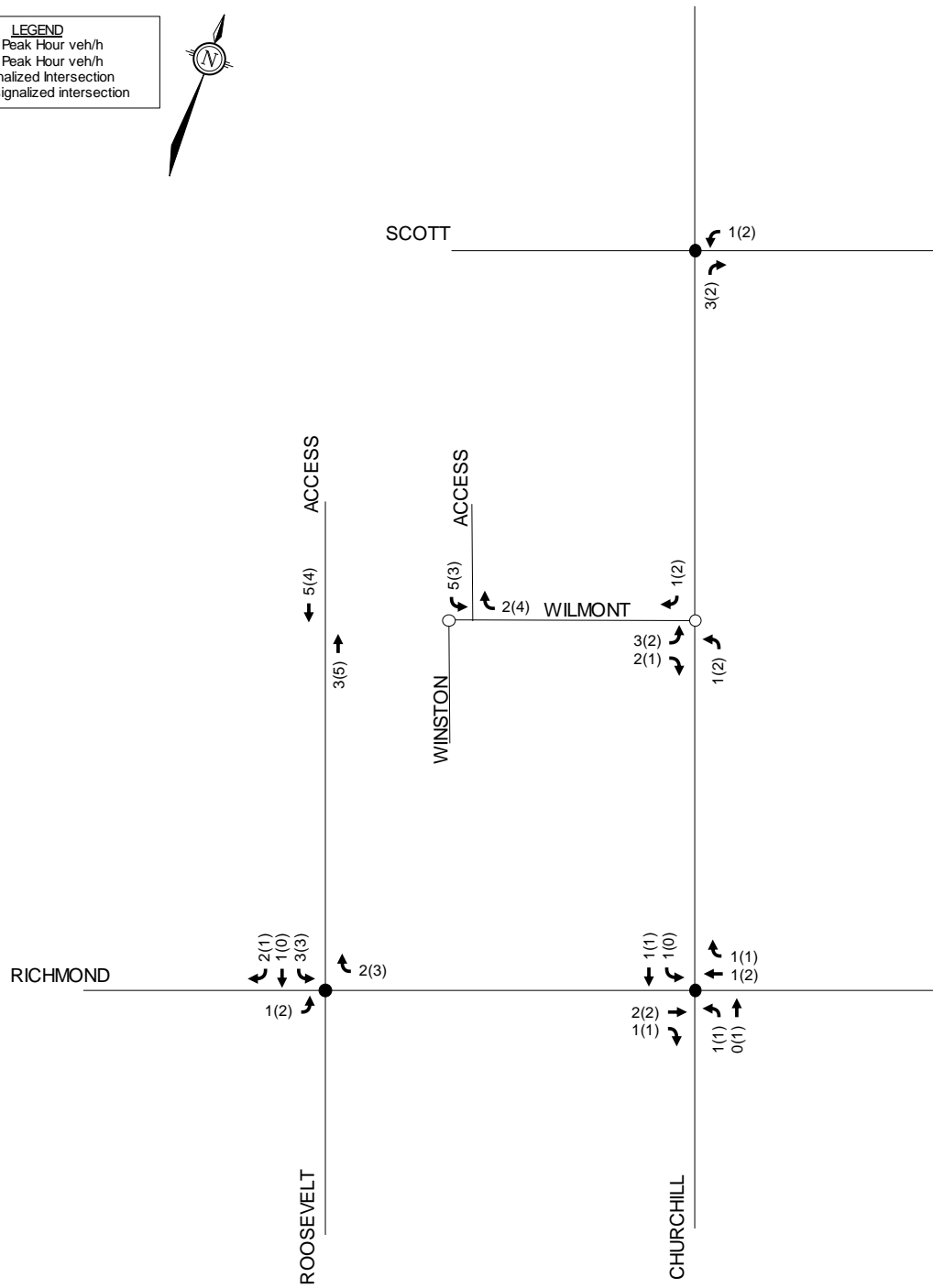


Figure 8: Site Generated Traffic

LEGEND	
xx	AM Peak Hour veh/h
(yy)	PM Peak Hour veh/h
●	Signalized Intersection
○	Unsignalized intersection



1 Screening

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

2 Existing and Planned Conditions

2.1 Proposed Development

The proposed development, located at 381 Churchill Avenue, 380 Winona Avenue, 319, 325, and 327 Richmond Road, is currently zoned as part Traditional Mainstreet (TM H15), part General Mixed Use (GM1), and part Residential Fourth Density (R4). The existing land uses include a car garage and maintenance shop, two small retail stores and a residential apartment with six units. TOD principles apply to the proposed development Study Area.

The proposed development is a nine-storey building with 184 apartment units, 1738 square metres of retail space, 130 vehicle parking spots, and 99 bicycle parking spaces. The site is proposed to have two accesses; one of which is a full movement access on Churchill Avenue approximately 65 metres north of the Churchill Avenue / Richmond Road intersection (measured from access centreline to intersection centre). The second access is located on Winona Avenue approximately 50 metres north of the Winona Avenue / Richmond Road intersection (measured from access centreline to intersection centre) and is a loading entrance with access solely to loading aisles. The anticipated full build-out and occupancy horizon is 2022. Figure 1 illustrates the Study Area context. Figure 2 illustrates the proposed site plan of the development.

Figure 1: Area Context Plan

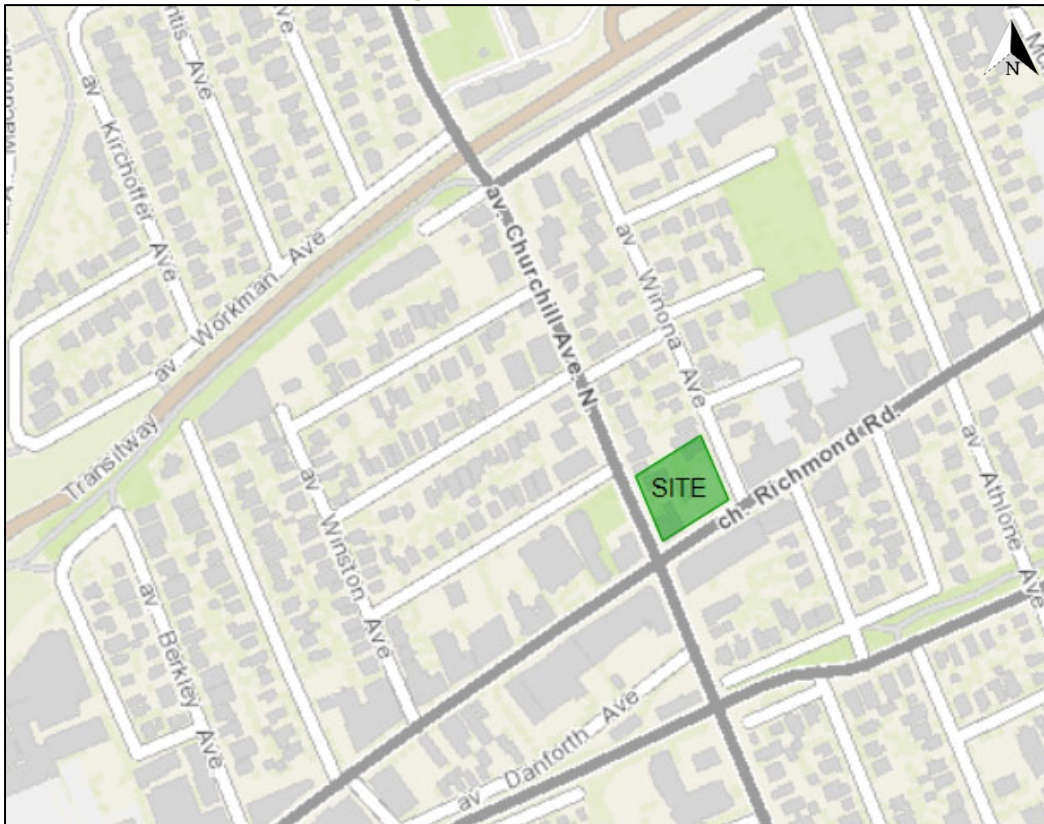
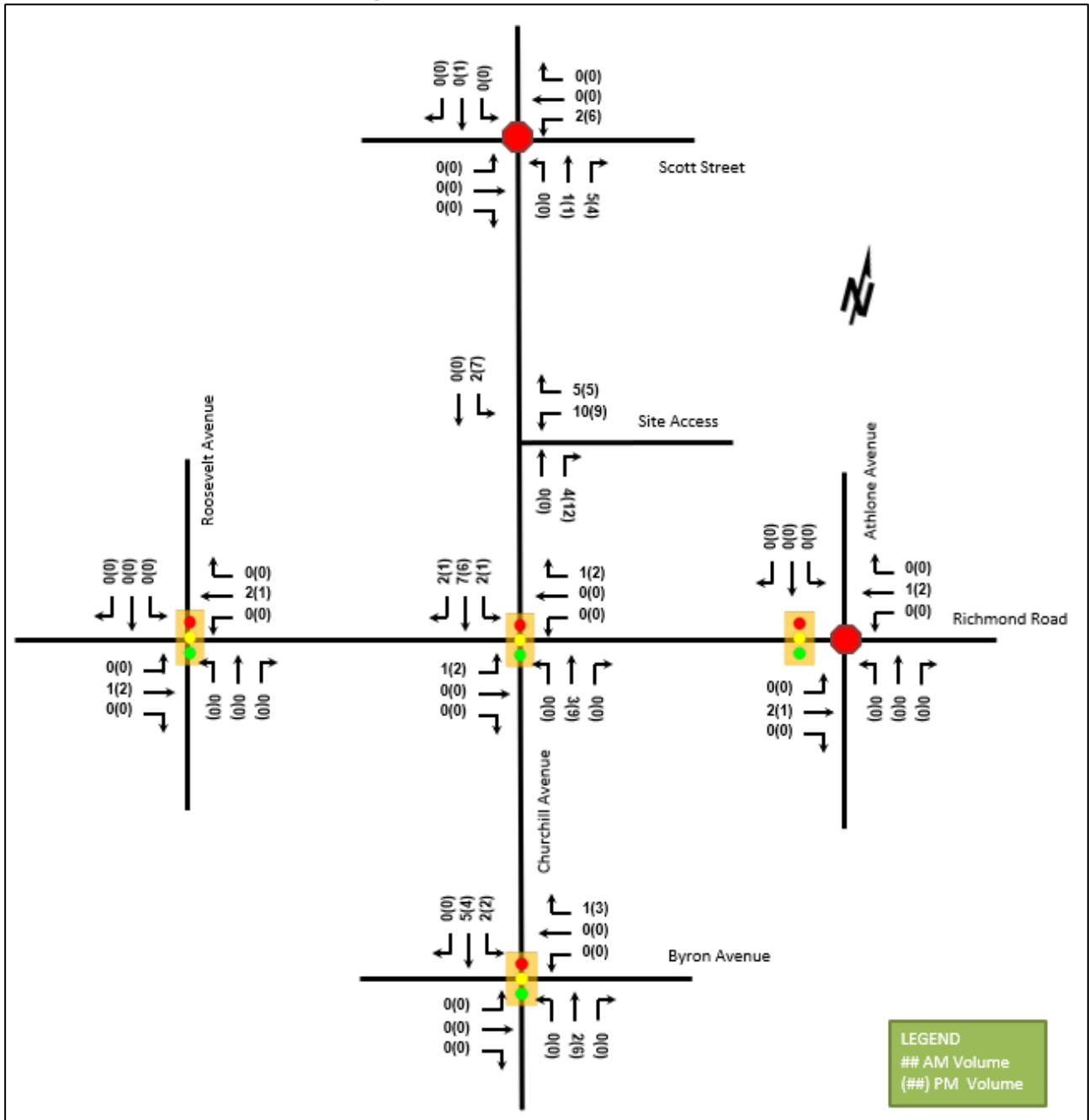


Figure 13: New Site Generation Auto Volumes



6 Background Network Travel Demands

6.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3.1. Both TOD policies and the opening of the Westboro LRT station and Dominion LRT station have been accounted for within the modal share assumptions. No road improvements are noted for this area with the exception of future road sewer, and water work along Winona Avenue.

1 Screening

This study has been prepared according to the City of Ottawa’s 2017 Transportation Impact Assessment (TIA) Guidelines. Accordingly, a Step 1 Screening Form has been prepared and is included as Appendix A, along with the Certification Form for TIA Study PM. As shown in the Screening Form, a TIA is required including the Design Review component and the Network Impact Component. This study has been prepared to support a site plan application for 320 McRae Avenue.

2 Existing and Planned Conditions

2.1 Proposed Development

The proposed development located at 320 McRae Avenue is currently a mix of residential and commercial buildings. The site is in an area that is zoned as part Traditional Mainstreet (TM 2489 S382-h), part Parks and Open Space (O 1) and part General Mixed Zone (GM2490 H (15) h). The proposed development is within 400 metres of the future Westboro LRT Station to be built by 2025 and therefore TOD principles apply to the applicable future horizons.

The proposed development is made up of a four-storey commercial / residential tower, and a commercial / residential tower with both a 26-storey and a six-storey component. The development is expected to have 882 square metres (9,494 square feet) of commercial space, 307 apartment units, 11 townhouse units, 185 underground automobile parking spaces and 163 bicycle parking spaces. Of the 163 bicycle spaces, 123 will be underground and due to space restrictions, 15 bicycle parking spaces will be slightly off the property and 25 will be in the loading area. The site is proposed to have two full-movement accesses, one approximately 40 metres, curb to curb, south of Scott Street on Tweedsmuir Avenue (Site Access #1) and the second approximately 120 metres, curb to curb, south of Scott Street on McRae Avenue (Site Access #2). Site Access #2 is a loading access and is intended for truck use only. A drop-off area is located on McRae Avenue, approximately 23 metres, curb to curb, south of Scott Street. The anticipated full build-out and occupancy horizon is 2022. Figure 1 illustrates the Study Area Context. Figure 2 illustrates the proposed concept plan.

Figure 1: Area Context Plan

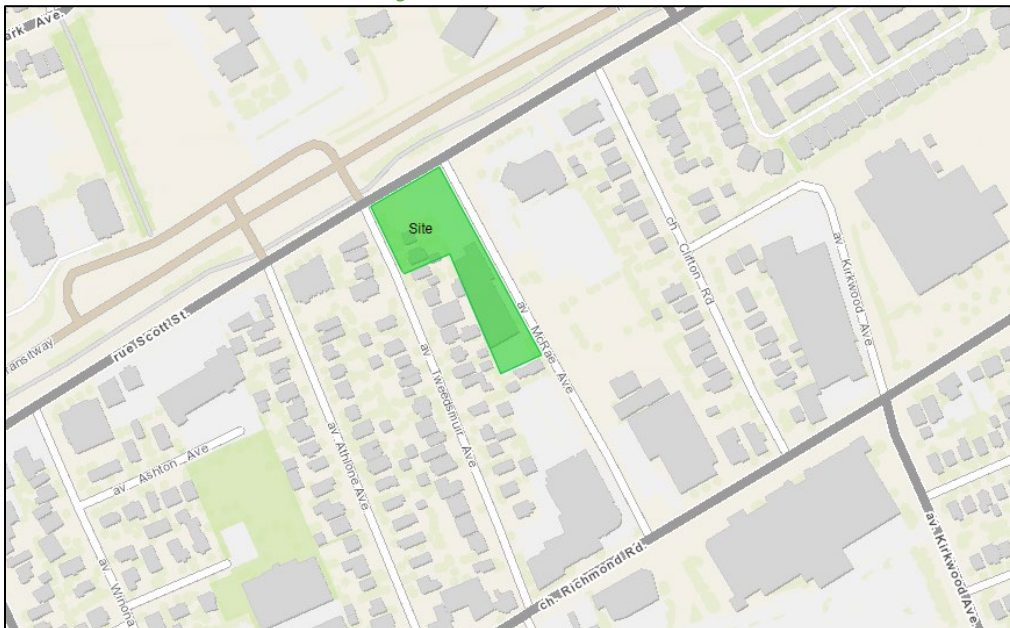
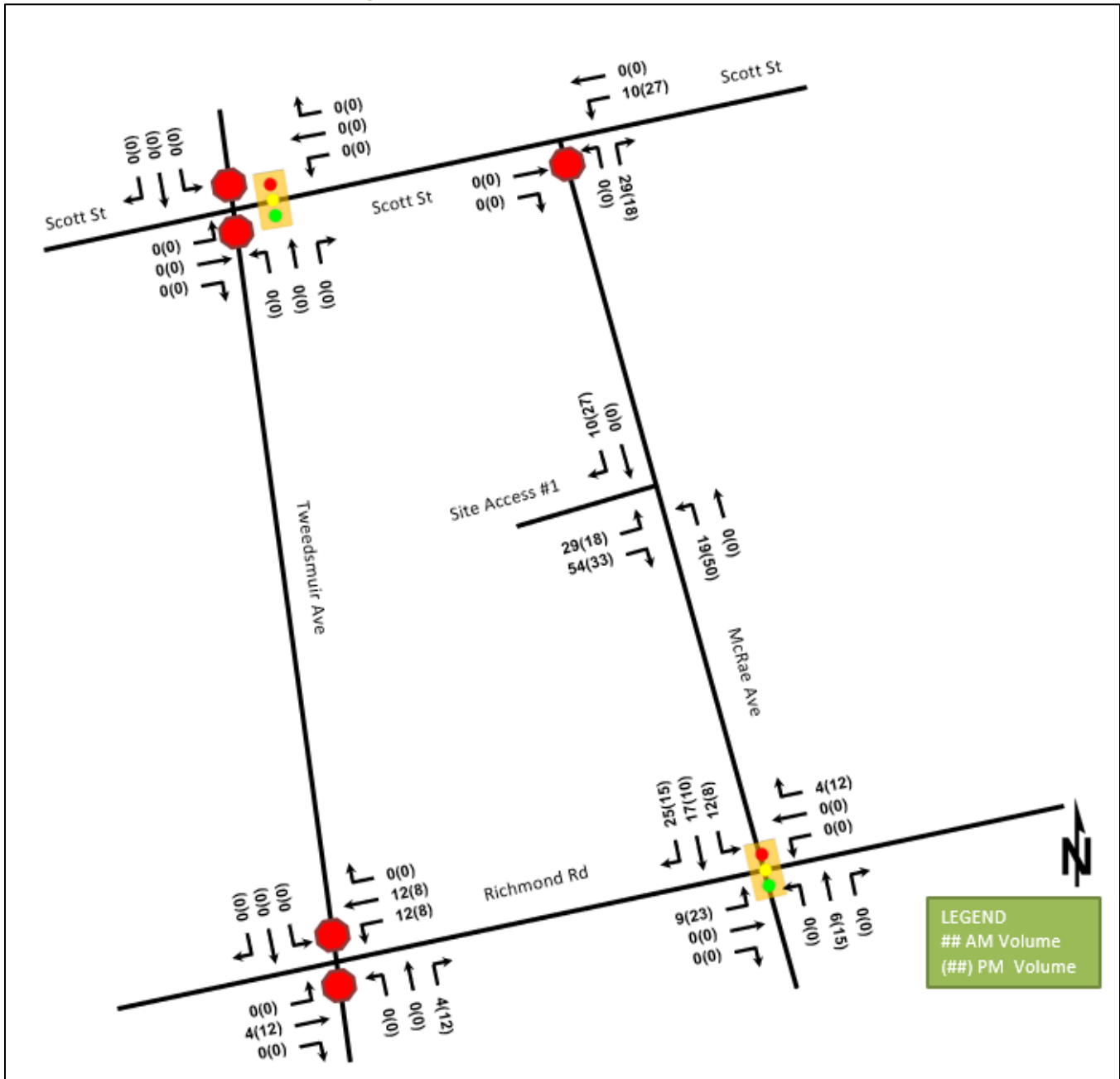
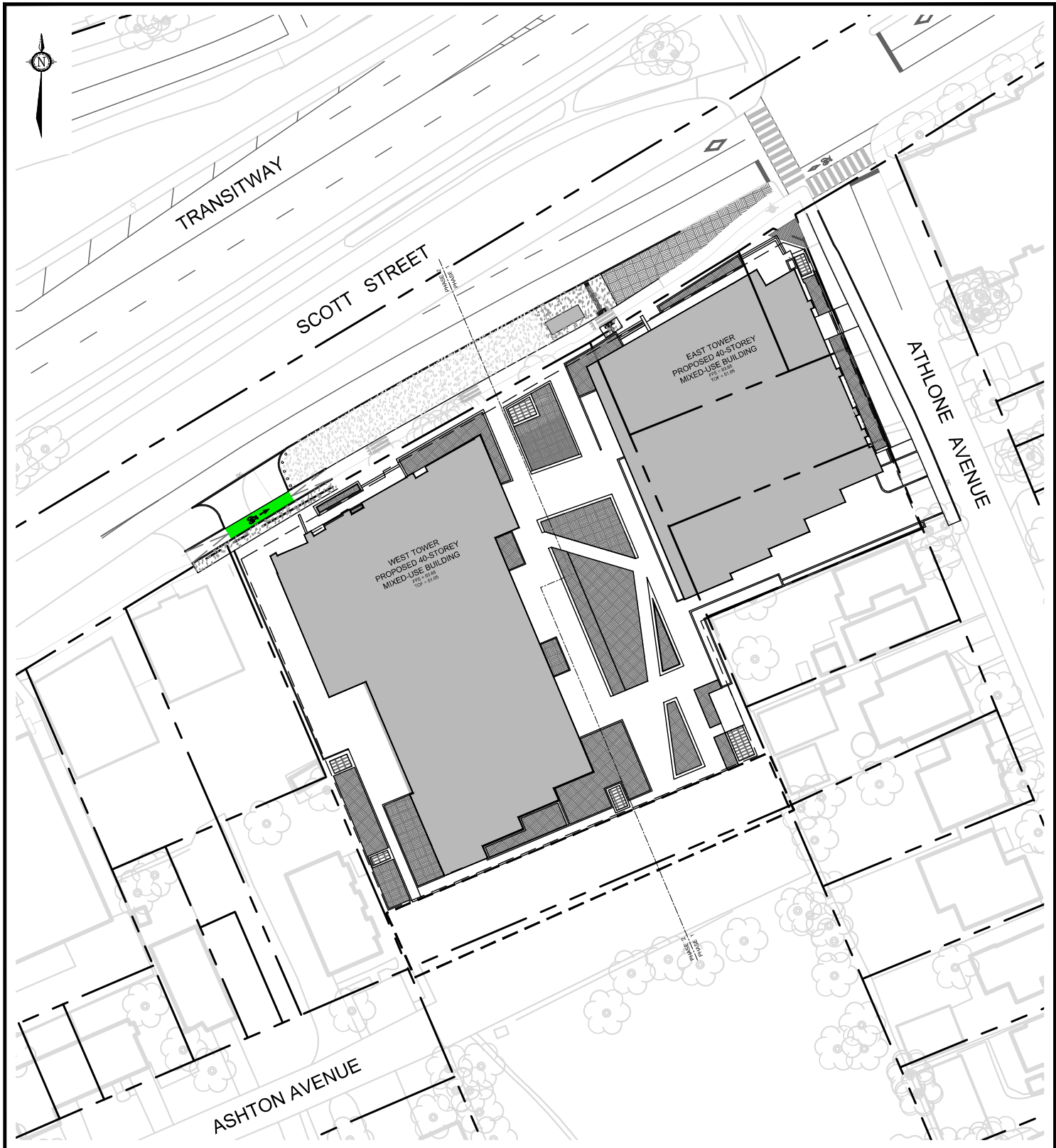


Figure 13: New 2022 Site Generation Auto Volumes





C:\temp\AcPublish_21280\Context.dwg, Context, Apr 04, 2024 - 10:28am, rhillier



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

2026 SCOTT STREET

CONTEXT PLAN

SCALE N.T.S.

DATE APR 2024

JOB 121302

FIGURE FIGURE 2

Figure 10: Net Site-Generated Traffic Volumes (2026)

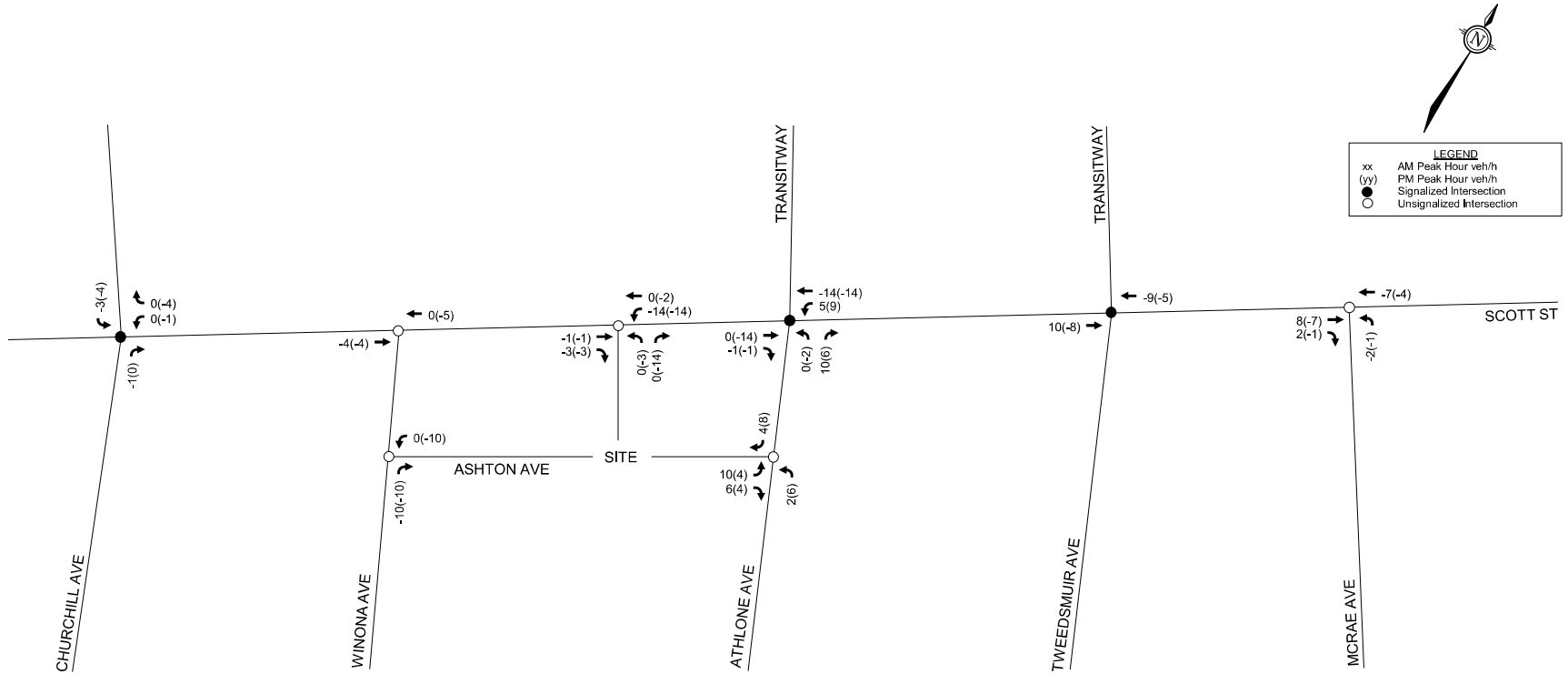
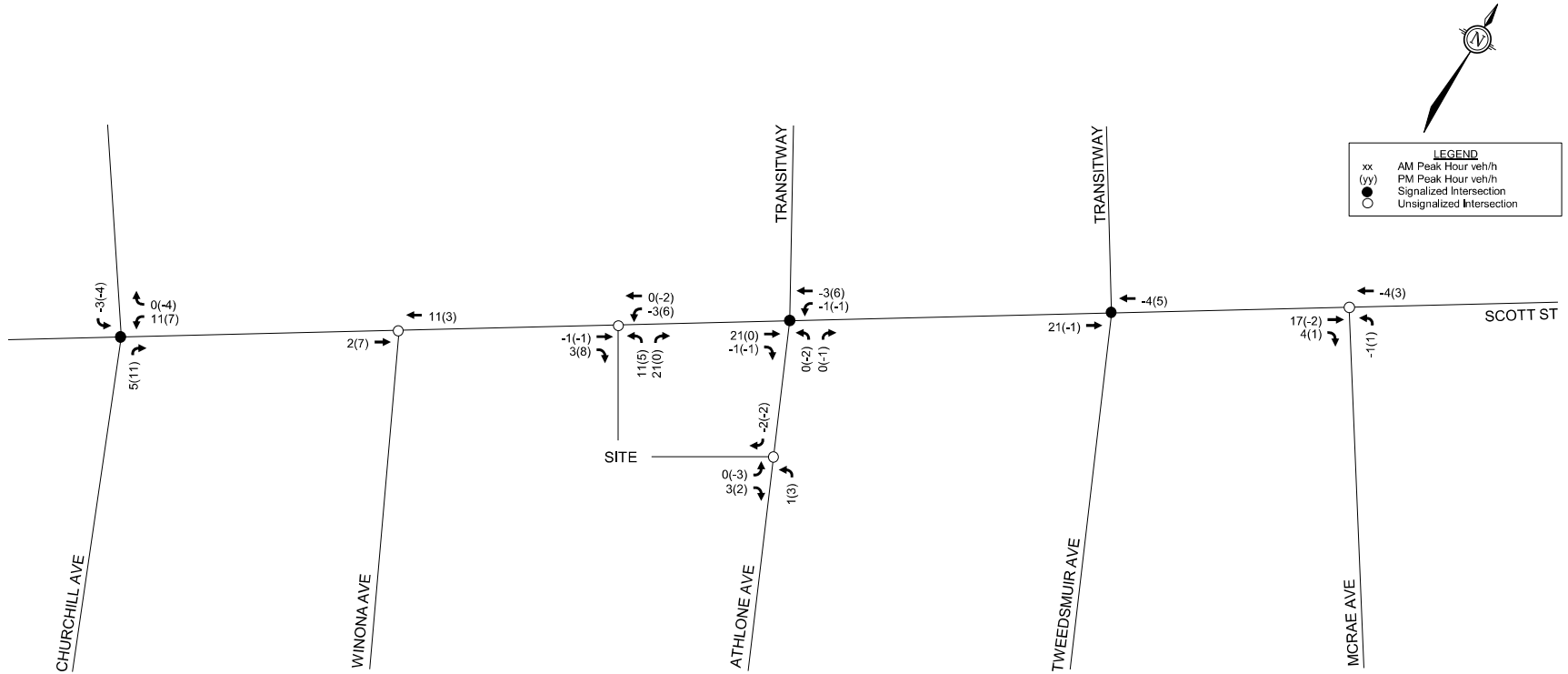


Figure 11: Net Site-Generated Traffic Volumes (2031)



TIA STRATEGY REPORT

The following Strategy Report has been prepared in support of a Zoning By-Law Amendment (ZBLA) for the proposed residential development located at 2050 Scott Street. This document follows the TIA process, as outlined in the City Transportation Impact Assessment (TIA) Guidelines (2017). City comments and responses have been included as Appendix A.

1. SCREENING FORM

The completed Screening Form for the proposed residential development at 2050 Scott Street confirmed the need for a TIA in support of the proposed development based on the Trip Generation, Location and Safety triggers. The proposed development consists of approximately 355 residential units; is located in a Design Priority Area (DPA) and Transit Oriented Development (TOD) area; and has a proposed driveway within the influence area of an adjacent traffic signal. The Screening Form is provided in Appendix B.

2. SCOPING REPORT

2.1. EXISTING AND PLANNED CONDITIONS

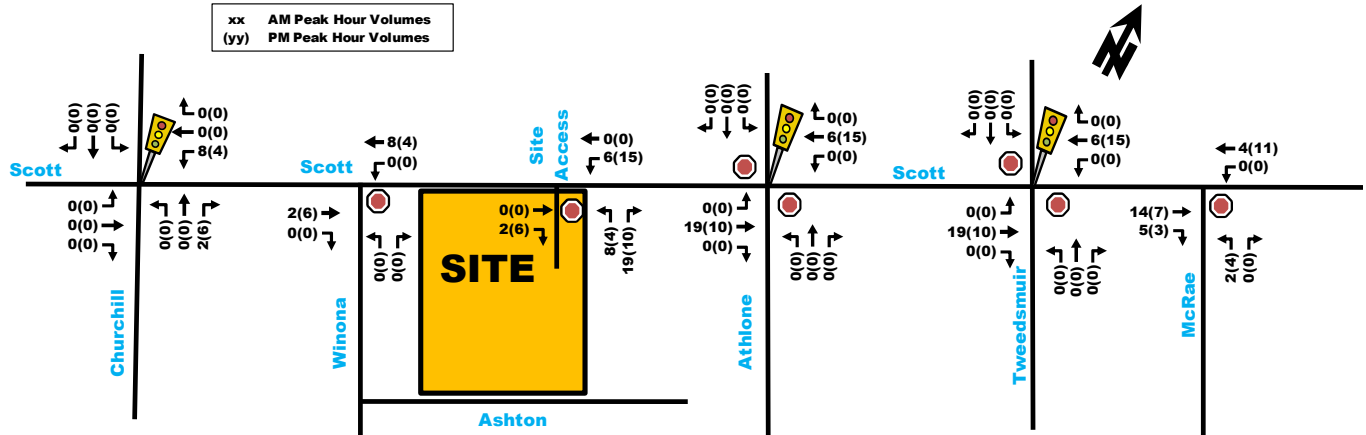
2.1.1. PROPOSED DEVELOPMENT

It is our understanding that the proponent is proposing to construct a residential development located at 2050 Scott Street. A single-phased project is proposed with assumed buildout year of 2021. The development will consist of a 30-storey residential building on a 3- and 6-storey podiums with approximately 353 units and 233 m² of ground commercial/office. The taller portion of the building is located closer to Scott Street while the 3- and 6-storey podiums extend towards Ashton Avenue. Vehicle access is proposed at Scott Street via a single all movement driveway. An underground parking lot with 204 vehicle spaces and 292 bicycle spaces are proposed. The site is located between 2 different land zonings, TM[103] fronting Scott Street and R4G on the south portion of the parcel towards Ashton Avenue. This TIA is in support of a Zoning By-Law Amendment (ZBLA) to vary the height schedule from 6-storeys (18 meters) to 30-storeys within the TM zoning and from 4-storeys (11 meters) to 6-storeys within the R4 zoning. Height step-backs (staggering) are proposed to assist in the transition from low-rise to mid- and high-rise from south to north. This TIA is also in support of a Site Plan Application (SPA). The site is currently occupied by a mechanic garage, a hot tub retailer and 3 residential houses. The local context of the site is provided as **Figure 1** and the proposed Site Plan is provided as **Figure 2**.

Figure 1: Local Context



Figure 9: 'New' Site-Generated Traffic

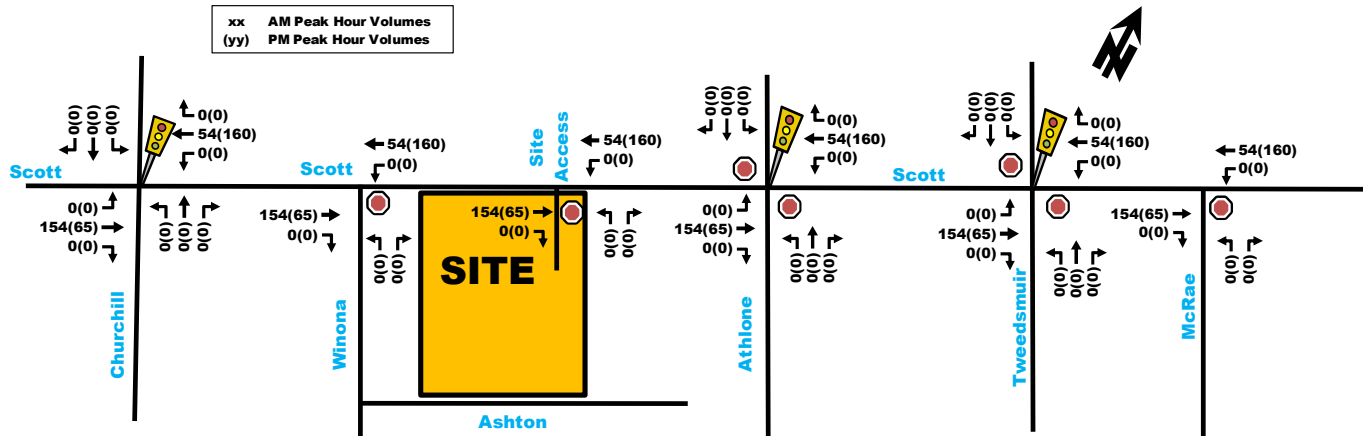


3.2. BACKGROUND NETWORK TRAVEL DEMANDS

3.2.1. TRANSPORTATION NETWORK PLANS

As mentioned in Section 2.1.3 Planned Conditions, 210 to 225 buses will be detoured on to Scott Street for the AM and PM peak periods respectively as part of the Stage 2 LRT West Extension construction. These buses were layered on to the study area intersections for the duration of anticipated construction (2021 to 2025) and are exhibited in **Figure 10**. Note that as part of the bus detours, Churchill/Scott intersection will be upgraded to a signalized intersection.

Figure 10: Buses Detoured on Scott Street



3.2.2. BACKGROUND GROWTH & OTHER DEVELOPMENTS

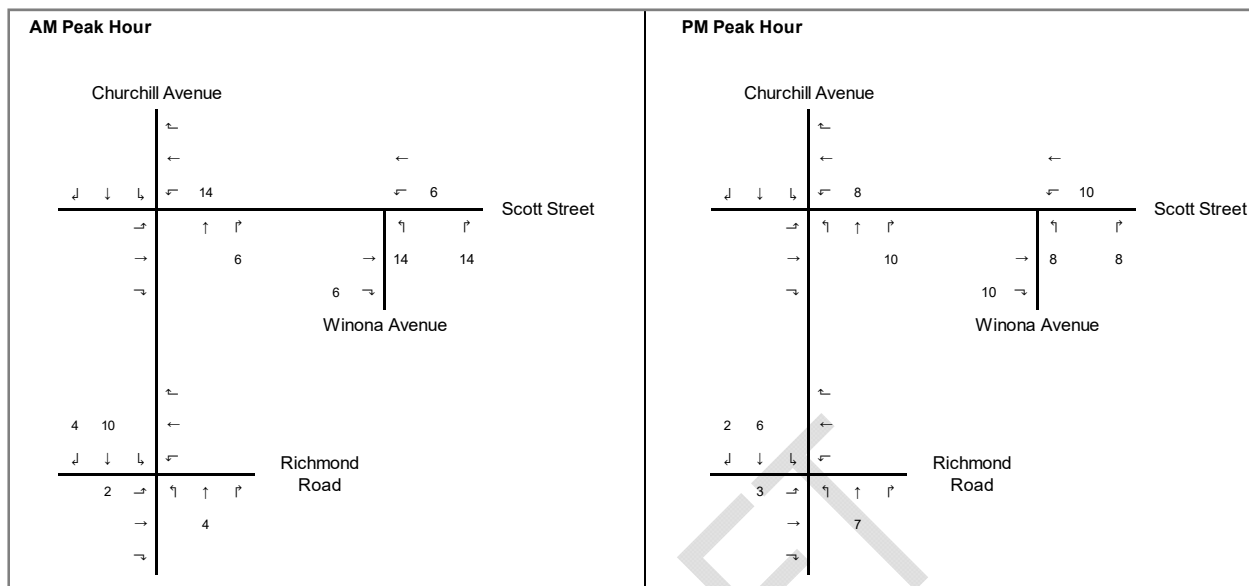
The emphasis in the City's recent Official Plan and Transportation Master Plan is to place priority on transit, encourage intensification around transit stations, encourage mixed-use developments and provide "complete streets" that better accommodate the active transportation needs of its residents and reduce the use of the private auto. Given the location of the site near future Confederation Line LRT Extension and future Scott Street 'Complete Street' plan, the trips generated from this development as well as nearby developments will likely choose alternate modes of transportation over driving. It is expected to see a decrease in vehicle traffic along Scott Street in the future as the public transportation network near the site becomes mature and alternate modes of transportation become more desirable (see map of anticipated background growth attached as Appendix F). As such, the background vehicle traffic volumes for horizon year 2026 is assumed to be the same as year 2021.

The projected vehicle volumes from the planned area developments as discussed in Section 2.1.3. 'Planned Conditions – Other Area Developments' were added to the study area intersections and are shown in **Figure 11**. The volumes from the other area development along with detoured buses were layered onto the existing traffic volumes for the future interim analysis volumes. Since the bus detour are anticipated between 2021 and 2025, they have been removed from 2026

Figure 1 - Site Location



Figure 12 - Site Trips



3.2 BACKGROUND NETWORK TRAVEL DEMAND

3.2.1 Transportation Network Plans

As outlined in **Table 4** in **Section 2.1.3.1**, there are two transit projects that are expected to occur within the vicinity of the proposed development; Western Light Rail Transit and the Richmond Road Transit Signal Priority. Based on direction from the City of Ottawa, the Western LRT is planned to be implemented by the 2027 ultimate horizon of the subject development.

3.2.2 Background Growth

The City of Ottawa provided **Figure 13** below, which outlines the average annual growth rates based on trend lines. As illustrated in this figure, the average annual growth in the Westboro neighbourhood is in the range of 0.2% - 2.0%. To be conservative, a 2% annual background growth rate was used in the subject analysis.



APPENDIX H

Transportation Demand Management

TDM-Supportive Development Design and Infrastructure Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

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

TDM-supportive design & infrastructure measures: <i>Non-residential developments</i>		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	<input checked="" type="checkbox"/>
BASIC	1.1.2 Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	<input checked="" type="checkbox"/>
BASIC	1.1.3 Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	<input checked="" type="checkbox"/>
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 <i>(see Official Plan policy 4.3.3)</i>	<input checked="" type="checkbox"/>
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 <i>(see Official Plan policy 4.3.12)</i>	<input checked="" type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Non-residential developments</i>		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 (<i>see Official Plan policy 4.3.10</i>)	<input checked="" type="checkbox"/>
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 (<i>see Official Plan policy 4.3.10</i>)	<input checked="" type="checkbox"/>
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 (<i>see Official Plan policy 4.3.11</i>)	<input checked="" type="checkbox"/>
BASIC	1.2.6 Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	<input checked="" type="checkbox"/>
BASIC	1.2.7 Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	<input type="checkbox"/>
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	<input type="checkbox"/>
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	<input type="checkbox"/>
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)	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Non-residential developments</i>		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 <i>Official Plan policy 4.3.6</i>)	<input checked="" type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
BASIC	2.1.4 Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	<input type="checkbox"/>
BETTER	2.1.5 Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	<input type="checkbox"/>
2.2 Secure bicycle parking		
REQUIRED	2.2.1 Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers (see <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
BETTER	2.2.2 Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	<input type="checkbox"/>
2.3 Shower & change facilities		
BASIC	2.3.1 Provide shower and change facilities for the use of active commuters	<input type="checkbox"/>
BETTER	2.3.2 In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	<input type="checkbox"/>
2.4 Bicycle repair station		
BETTER	2.4.1 Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Non-residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
3. TRANSIT		
3.1 Customer amenities		
BASIC	3.1.1 Provide shelters, lighting and benches at any on-site transit stops	<input type="checkbox"/>
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	<input type="checkbox"/>
BETTER	3.1.3 Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	<input type="checkbox"/>
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	<input type="checkbox"/>
4.2 Carpool parking		
BASIC	4.2.1 Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	<input type="checkbox"/>
BETTER	4.2.2 At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	<input type="checkbox"/>
5. CARSHARING & BIKESHARING		
5.1 Carshare parking spaces		
BETTER	5.1.1 Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces (<i>see Zoning By-law Section 94</i>)	<input type="checkbox"/>
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	<input type="checkbox"/>

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

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: <i>Residential developments</i>		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	<input checked="" type="checkbox"/>
BASIC	1.1.2 Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	<input checked="" type="checkbox"/>
BASIC	1.1.3 Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	<input checked="" type="checkbox"/>
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 <i>(see Official Plan policy 4.3.3)</i>	<input checked="" type="checkbox"/>
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 <i>(see Official Plan policy 4.3.12)</i>	<input checked="" type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		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 <i>Official Plan policy 4.3.10</i>)	<input checked="" type="checkbox"/>
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 <i>Official Plan policy 4.3.10</i>)	<input checked="" type="checkbox"/>
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 <i>Official Plan policy 4.3.11</i>)	<input checked="" type="checkbox"/>
BASIC	1.2.6 Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	<input checked="" type="checkbox"/>
BASIC	1.2.7 Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	<input type="checkbox"/>
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	<input type="checkbox"/>
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	<input type="checkbox"/>
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)	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		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 <i>Official Plan policy 4.3.6</i>)	<input checked="" type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
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	<input type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
BETTER	2.2.2 Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	<input type="checkbox"/>
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)	<input type="checkbox"/>
3. TRANSIT		
3.1 Customer amenities		
BASIC	3.1.1 Provide shelters, lighting and benches at any on-site transit stops	<input type="checkbox"/>
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	<input type="checkbox"/>
BETTER	3.1.3 Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		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	<input type="checkbox"/>
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 <i>Zoning By-law Section 94</i>)	<input type="checkbox"/>
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	<input type="checkbox"/>
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	<input checked="" type="checkbox"/>
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	<input type="checkbox"/>
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 <i>Zoning By-law Section 104</i>)	<input type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input type="checkbox"/>
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)	<input type="checkbox"/>

TDM Measures Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

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: <i>Non-residential developments</i>		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 <input type="checkbox"/>
1.2 Travel surveys		
BETTER		1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress <input type="checkbox"/>
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 <input checked="" type="checkbox"/>
2.2 Bicycle skills training		
<i>Commuter travel</i>		
BETTER	★	2.2.1 Offer on-site cycling courses for commuters, or subsidize off-site courses <input type="checkbox"/>
2.3 Valet bike parking		
<i>Visitor travel</i>		
BETTER		2.3.1 Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games) <input type="checkbox"/>

TDM measures: <i>Non-residential developments</i>		Check if proposed & add descriptions
3. TRANSIT		
3.1 Transit information		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances	<input checked="" type="checkbox"/>
BASIC	3.1.2 Provide online links to OC Transpo and STO information	<input type="checkbox"/>
BETTER	3.1.3 Provide real-time arrival information display at entrances	<input type="checkbox"/>
3.2 Transit fare incentives		
<i>Commuter travel</i>		
BETTER	3.2.1 Offer preloaded PRESTO cards to encourage commuters to use transit	<input type="checkbox"/>
BETTER ★	3.2.2 Subsidize or reimburse monthly transit pass purchases by employees	<input type="checkbox"/>
<i>Visitor travel</i>		
BETTER	3.2.3 Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	<input type="checkbox"/>
3.3 Enhanced public transit service		
<i>Commuter travel</i>		
BETTER	3.3.1 Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	<input type="checkbox"/>
<i>Visitor travel</i>		
BETTER	3.3.2 Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	<input type="checkbox"/>
3.4 Private transit service		
<i>Commuter travel</i>		
BETTER	3.4.1 Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends)	<input type="checkbox"/>
<i>Visitor travel</i>		
BETTER	3.4.2 Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games)	<input type="checkbox"/>

TDM measures: <i>Non-residential developments</i>		Check if proposed & add descriptions
4. RIDESHARING		
4.1 Ridematching service		
<i>Commuter travel</i>		
BASIC	★ 4.1.1 Provide a dedicated ridematching portal at OttawaRideMatch.com	<input type="checkbox"/>
4.2 Carpool parking price incentives		
<i>Commuter travel</i>		
BETTER	4.2.1 Provide discounts on parking costs for registered carpools	<input type="checkbox"/>
4.3 Vanpool service		
<i>Commuter travel</i>		
BETTER	4.3.1 Provide a vanpooling service for long-distance commuters	<input type="checkbox"/>
5. CARSHARING & BIKESHARING		
5.1 Bikeshare stations & memberships		
BETTER	5.1.1 Contract with provider to install on-site bikeshare station for use by commuters and visitors	<input type="checkbox"/>
<i>Commuter travel</i>		
BETTER	5.1.2 Provide employees with bikeshare memberships for local business travel	<input type="checkbox"/>
5.2 Carshare vehicles & memberships		
<i>Commuter travel</i>		
BETTER	5.2.1 Contract with provider to install on-site carshare vehicles and promote their use by tenants	<input type="checkbox"/>
BETTER	5.2.2 Provide employees with carshare memberships for local business travel	<input type="checkbox"/>
6. PARKING		
6.1 Priced parking		
<i>Commuter travel</i>		
BASIC	★ 6.1.1 Charge for long-term parking (daily, weekly, monthly)	<input type="checkbox"/>
BASIC	6.1.2 Unbundle parking cost from lease rates at multi-tenant sites	<input type="checkbox"/>
<i>Visitor travel</i>		
BETTER	6.1.3 Charge for short-term parking (hourly)	<input type="checkbox"/>

TDM measures: <i>Non-residential developments</i>		Check if proposed & add descriptions
7. TDM MARKETING & COMMUNICATIONS		
7.1 Multimodal travel information		
<i>Commuter travel</i>		
BASIC ★	7.1.1 Provide a multimodal travel option information package to new/relocating employees and students	<input checked="" type="checkbox"/>
<i>Visitor travel</i>		
BETTER ★	7.1.2 Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games)	<input type="checkbox"/>
7.2 Personalized trip planning		
<i>Commuter travel</i>		
BETTER ★	7.2.1 Offer personalized trip planning to new/relocating employees	<input type="checkbox"/>
7.3 Promotions		
<i>Commuter travel</i>		
BETTER	7.3.1 Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes	<input type="checkbox"/>
8. OTHER INCENTIVES & AMENITIES		
8.1 Emergency ride home		
<i>Commuter travel</i>		
BETTER ★	8.1.1 Provide emergency ride home service to non-driving commuters	<input type="checkbox"/>
8.2 Alternative work arrangements		
<i>Commuter travel</i>		
BASIC ★	8.2.1 Encourage flexible work hours	<input type="checkbox"/>
BETTER	8.2.2 Encourage compressed workweeks	<input type="checkbox"/>
BETTER ★	8.2.3 Encourage telework	<input type="checkbox"/>
8.3 Local business travel options		
<i>Commuter travel</i>		
BASIC ★	8.3.1 Provide local business travel options that minimize the need for employees to bring a personal car to work	<input type="checkbox"/>
8.4 Commuter incentives		
<i>Commuter travel</i>		
BETTER	8.4.1 Offer employees a taxable, mode-neutral commuting allowance	<input type="checkbox"/>
8.5 On-site amenities		
<i>Commuter travel</i>		
BETTER	8.5.1 Provide on-site amenities/services to minimize mid-day or mid-commute errands	<input type="checkbox"/>

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 <input type="checkbox"/>
1.2 Travel surveys		
BETTER		1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress <input type="checkbox"/>
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 (<i>multi-family, condominium</i>) <input checked="" type="checkbox"/>
2.2 Bicycle skills training		
BETTER		2.2.1 Offer on-site cycling courses for residents, or subsidize off-site courses <input type="checkbox"/>

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
3. TRANSIT		
3.1 Transit information		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances (<i>multi-family, condominium</i>)	<input checked="" type="checkbox"/>
BETTER	3.1.2 Provide real-time arrival information display at entrances (<i>multi-family, condominium</i>)	<input type="checkbox"/>
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	<input type="checkbox"/>
BETTER	3.2.2 Offer at least one year of free monthly transit passes on residence purchase/move-in	<input type="checkbox"/>
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 (<i>subdivision</i>)	<input type="checkbox"/>
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)	<input type="checkbox"/>
4. CARSHARING & BIKESHARING		
4.1 Bikeshare stations & memberships		
BETTER	4.1.1 Contract with provider to install on-site bikeshare station (<i>multi-family</i>)	<input type="checkbox"/>
BETTER	4.1.2 Provide residents with bikeshare memberships, either free or subsidized (<i>multi-family</i>)	<input type="checkbox"/>
4.2 Carshare vehicles & memberships		
BETTER	4.2.1 Contract with provider to install on-site carshare vehicles and promote their use by residents	<input type="checkbox"/>
BETTER	4.2.2 Provide residents with carshare memberships, either free or subsidized	<input type="checkbox"/>
5. PARKING		
5.1 Priced parking		
BASIC ★	5.1.1 Unbundle parking cost from purchase price (<i>condominium</i>)	<input type="checkbox"/>
BASIC ★	5.1.2 Unbundle parking cost from monthly rent (<i>multi-family</i>)	<input checked="" type="checkbox"/>

TDM measures: <i>Residential developments</i>		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	<input checked="" type="checkbox"/>
6.2 Personalized trip planning		
BETTER ★	6.2.1 Offer personalized trip planning to new residents	<input type="checkbox"/>

APPENDIX I

MMLOS Analysis

Segment MMLOS Analysis

This section provides a review of the boundary streets Scott Street and Clifton Road, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation, based on the targets for roadways 'within 600m of a rapid transit station.'

Exhibit 4 of the *MMLOS Guidelines* has been used to evaluate the segment pedestrian level of service (PLOS) of the boundary streets. Exhibit 22 of the *MMLOS Guidelines* suggest a target PLOS A for all roadways within 600m of a rapid transit station. 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 the boundary streets. Exhibit 22 of the *MMLOS Guidelines* suggest a target BLOS A for Crosstown Bikeways within 600m of a rapid transit station (Scott Street), and a target BLOS D for all roadways with no cycling designation within 600m of a rapid transit station (Clifton Road). 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 Scott Street only, as transit service is not provided on Clifton Road. Exhibit 22 of the *MMLOS Guidelines* suggest a target TLOS A for Rapid Transit Corridors within 600m of a rapid transit station. The results of the segment TLOS analysis are summarized in **Table 3**.

Exhibit 20 of the *MMLOS Guidelines* has been used to evaluate the segment truck level of service (TkLOS) of Scott Street only, as Clifton Road is not a truck route. Exhibit 22 of the *MMLOS Guidelines* suggest a target TkLOS D for Truck Routes within 600m of a rapid transit station. The results of the segment TkLOS analysis are summarized in **Table 4**.

Table 1: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On-Street Parking	Operating Speed ⁽¹⁾	PLOS
Scott Street (north side, McRae Avenue to Clifton Road)					
≥ 2.0m	> 2.0m	> 3,000 vpd	Yes	60 km/h	B
Scott Street (south side, McRae Avenue to Clifton Road)					
≥ 2.0m	> 2.0m	> 3,000 vpd	No	60 km/h	C
Clifton Road (east side, Scott Street to Wilber Avenue)					
No sidewalk		≤ 3,000 vpd	N/A	30 km/h	C
Clifton Road (west side, Scott Street to Wilber Avenue)					
≥ 2.0m	0m	≤ 3,000 vpd	N/A	30 km/h	A

1. Operating speed taken as the speed limit plus 10 km/h for Scott Street;
Operating speed taken as the 30 km/h speed limit for Clifton Road, given the implementation of traffic calming measures

Table 2: BLOS Segment Analysis

Road Class	Bike Route	Type of Bikeway	Travel Lanes	Operating Speed	BLOS
Scott Street (north side, McRae Avenue to Clifton Road)					
Arterial	Crosstown Bikeway	Cycle Track	2	60 km/h	A
Clifton Road (both sides, Scott Street to Richmond Road)					
Local	No Class	Mixed Traffic	2	30 km/h	A

Table 3: TLOS Segment Analysis

Facility Type	Exposure to Congestion Delay, Friction, and Incidents			TLOS
	Congestion	Friction	Incident Potential	
Scott Street (McRae Avenue to Clifton Road)				
Mixed Traffic – Limited Parking/Driveway Friction	Yes	Low	Medium	D

Table 4: TkLOS Segment Analysis

Curb Lane Width	Number of Travel Lanes Per Direction	TkLOS
Scott Street (McRae Avenue to Clifton Road)		
3.5m to 3.7m	1	B