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Proposed Residential Development
4829 Abbott Street East, Ottawa, ON

Transportation Impact Assessment

Proposed Residential Development
4829 Abbott Street East

Transportation Impact Assessment

Prepared By:

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

May 2025

Novatech File: 110037
Ref: R-2025-020

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Engineers, Planners & Landscape Architects

May 14, 2025

City of Ottawa
Planning, Development, and Building Services Department
110 Laurier Avenue West, 4th Floor
Ottawa, ON K1P 1J1

Attention: **Ms. Rochelle Fortier-Lesage**
Transportation Project Manager, Infrastructure Approvals

Dear Ms. Fortier-Lesage:

Reference: **4829 Abbott Street East**
Transportation Impact Assessment
Novatech File No. 110037

We are pleased to submit the following Transportation Impact Assessment (TIA), in support of Zoning By-Law Amendment and Site Plan Control applications at 4829 Abbott Street East, 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 Jennifer Luong, or the undersigned.

Yours truly,

NOVATECH

Joshua Audia, P.Eng.
Project Engineer | Transportation

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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

City of Ottawa
Transportation Engineering Services
Planning, Real Estate and Economic Development
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Ottawa, ON K1P 1J1
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☑ I am either a licensed or registered[1] professional in good standing, whose field of expertise [check ✓ appropriate field(s)]:

- ☑ is either transportation engineering
- ☐ or transportation planning.

Dated at Ottawa (City) this 14th day of May, 20 25.

Name: Jennifer Luong, P.Eng.

Professional Title: Senior Project Manager

Jennifer Luong

_____

Signature of Individual certifier that they meet the above four criteria

Office Contact Information (Please Print)	
Address:	240 Michael Cowpland Drive, Suite 200
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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 Zoning By-Law Amendment and Site Plan Control applications for the property located at 4829 Abbott Street East. The subject property is approximately 0.93 hectares in area. An existing homes sales centre for the Trail View subdivision is located at the southwest corner of the site. The sales centre is currently accessed via a single full-movement driveway to Abbott Street East.

The subject site is surrounded by the following:

- Adstock Heights and future residences to the north,
- Abbott Street East, followed by residences to the south,
- A stormwater facility, followed by Terry Fox Drive to the east, and
- Residences, followed by Cranesbill Road to the west.

The proposed development includes five low-rise stacked apartments, consisting of a total of 60 dwellings. The existing sales centre will be renovated to include a smaller sales office and two-bedroom dwelling when the sales centre is no longer required for the Trail View subdivision. Therefore, a total of 61 dwellings have been conservatively considered for the purposes of this TIA.

A total of 102 at-grade parking spaces are proposed. Access to the proposed development will be provided using the existing full-movement driveway that serves the sales centre. No new driveways to Abbott Street East are proposed. The development will be constructed in a single phase, with a buildout year of 2027.

The proposed development forms Phase 5 of the Trail View subdivision, and is located within the Fernbank Community Design Plan area. The subject site is designated as 'Neighbourhood' and 'Corridor – Minor' (Abbott Street East) on Schedule B5 of the City of Ottawa's *Official Plan*. The implemented zoning for the property is 'Residential Fourth-Density' (R4S[2351]).

The study area for this report includes the boundary roadway Abbott Street East, as well as the roundabout at Abbott Street East/Cranesbill Road/Rouncey Road.

The selected time periods for this report 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 2027 and horizon year 2032 have been considered.

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

Site-Generated Traffic

- The proposed development is estimated to generate 41 person trips (including 22 vehicle trips) during the AM peak hour, and 45 person trips (including 24 vehicle trips) during the PM peak hour.

Development Design and Parking

- On-site pedestrian walkways will be provided to each building, and up to each entrance. The network of on-site walkways will connect to the existing sidewalk on Abbott Street East. The sidewalk across the existing access is continuous, per City of Ottawa standards.

- Bicycle parking will be provided in exterior areas adjacent to each proposed building. A total of 30 bike parking spaces will be provided.

- The on-site fire route will include the existing entrance and its drive aisle. Any fire trucks entering the site will drive forward in and reverse out onto Abbott Street East. Off-site, fire trucks responding to Buildings 1 and 2 can respond curbside on Abbott Street East, and fire trucks responding Buildings 3, 4, and 5 can respond curbside on Adstock Heights.

- No dedicated loading spaces are proposed as part of the development. Moving trucks loading and unloading are anticipated to park temporarily in the drive aisle adjacent to the unit where a resident is moving in or out. Garbage collection will occur adjacent to the garage that is located between the existing sales centre and the proposed residential building at the northwestern corner of the site.

- The proposed number of vehicle and bicycle parking spaces meets the requirement. A total of two accessible parking spaces are proposed for the development, including maintaining the existing accessible parking space adjacent to the sales centre. This meets the minimum requirements outlined in the *City of Ottawa Accessibility Design Standards*.

Boundary Streets

- Abbott Street East meets the target pedestrian level of service and bicycle level of service. No targets are identified for transit level of service or truck level of service.

Transportation Demand Management (TDM)

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

- The list of measures to be considered by the proponent is summarized as follows:
    - 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.

1.0 SCREENING

1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared in support of Zoning By-Law Amendment and Site Plan Control applications for the property located at 4829 Abbott Street East. The subject property is approximately 0.93 hectares in area. An existing homes sales centre for the Trail View subdivision is located at the southwest corner of the site. The sales centre is currently accessed via a single full-movement driveway to Abbott Street East.

The subject site is surrounded by the following:

- Adstock Heights and future residences to the north,
- Abbott Street East, followed by residences to the south,
- A stormwater facility, followed by Terry Fox Drive to the east, and
- Residences, followed by Cranesbill Road to the west.

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

Figure 1: View of the Subject Site

1.2 Proposed Development

The proposed development includes five low-rise stacked apartments, consisting of a total of 60 dwellings. The existing sales centre will be renovated to include a smaller sales office and two-bedroom dwelling when the sales centre is no longer required for the Trail View subdivision. Therefore, a total of 61 dwellings have been conservatively considered for the purposes of this TIA.

A total of 102 at-grade parking spaces are proposed. Access to the proposed development will be provided using the existing full-movement driveway that serves the sales centre. No new driveways to Abbott Street East are proposed. The development will be constructed in a single phase, with a buildout year of 2027.

The proposed development forms Phase 5 of the Trail View subdivision, and is located within the Fernbank Community Design Plan area. The subject site is designated as 'Neighbourhood' and 'Corridor – Minor' (Abbott Street East) on Schedule B5 of the City of Ottawa's *Official Plan*. The implemented zoning for the property is 'Residential Fourth-Density' (R4S[2351]).

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

1.3 Screening Form

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

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

- Location Triggers – The development does not propose a new connection to a designated Rapid Transit or Transit Priority (RTTP) corridor or a Crosstown Bikeway, and is not located within a Hub, Protected Major Transit Station Area (PMTSA), or Design Priority Area (DPA); further assessment is **not required** based on this trigger.

- Safety Triggers – The proposed development is within 150m of a roundabout; further assessment is **required** based on this trigger.

2.0 SCOPING

2.1 Existing Conditions

2.1.1 Roadways

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

Abbott Street East is a major collector roadway that generally runs on an east-west alignment between Stittsville Main Street and Terry Fox Drive. West of Stittsville Main Street, the roadway continues as a collector roadway (Abbott Street West). East of Terry Fox Drive, the roadway continues as a major collector roadway (Castlefrank Road). Within the study area, Abbott Street East has a posted speed limit of 40 km/h, and has a two-lane undivided urban cross-section with cycle tracks and sidewalks on both sides. Abbott Street East is not designated as a truck route. Street parking is restricted on the north side between December 1 and March 31, and is otherwise permitted on either side of the roadway. The right-of-way (ROW) width of Abbott Street East at the subject site's frontage is 26m.

Cranesbill Road is a major collector roadway that runs on a curvilinear alignment between Abbott Street East and Baldcypress Way. As the community develops, Cranesbill Road is planned to extend west to the future Robert Grant Avenue. South of Abbott Street East, the roadway continues as Rouncey Road (discussed below). Within the study area, Cranesbill Road has an unposted regulatory speed limit of 50 km/h, and has a two-lane undivided urban cross-section with sidewalks on both sides. Cranesbill Road is not designated as a truck route. Street parking is permitted on both sides of the roadway.

Rouncey Road is a major collector roadway that generally runs on a north-south alignment between Abbott Street East and Fernbank Road. Within the study area, Rouncey Road has an unposted regulatory speed limit of 50 km/h, and has a two-lane undivided urban cross-section with sidewalks on both sides. Rouncey Road is not designated as a truck route. Street parking is permitted on both sides of the roadway.

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

2.1.2 Intersections

Abbott Street East/Cranesbill Road/Rouncey Road

- Four-legged roundabout
- All approaches include a single lane for all movements (U-turns, left turns, through, and right turns)
- Pedestrian crossover (PXO) Type D on all approaches

Figure 2: Roadway Network

2.1.3 Driveways

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

Abbott Street East, north side

- Four driveways to residences at 4861-4867 Abbott Street East.

Abbott Street East, south side

- Twenty-eight driveways to residences at 4774-4868 Abbott Street East.

2.1.4 Pedestrian and Cycling Facilities

Within the study area, concrete sidewalks are provided on both sides of Abbott Street East, Cranesbill Road, and Rouncey Road. On Abbott Street East, the sidewalk is continuous on the south side of the roadway, connecting to the Trans-Canada Trail at Robert Grant Avenue. On the north side, the sidewalk terminates approximately 80m west of Lift Lane.

Asphalt cycle tracks are provided on Abbott Street East, west of Terry Fox Drive. The cycle track is continuous on the south side of the roadway, connecting to the Trans-Canada Trail at Robert Grant Avenue. On the north side, the western end of the cycle track terminates approximately 80m west of Lift Lane. A north-south pathway is provided on the west side of Terry Fox Drive. This pathway provides connectivity between just south of Winchester Drive (north of the study area) and Fernbank Road (south of the study area).

The nearest Crosstown Bikeways to the subject site include the Trans-Canada Trail corridor, Terry Fox Drive (south of Abbott Street East/Castlefrank Road), and Castlefrank Road.

2.1.5 Area Traffic Management

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

Area 40 km/h speed limit signs and pavements markings have been implemented on Castlefrank Road (east of Terry Fox Drive). There are no traffic calming measures that have been implemented on Abbott Street East and Cranesbill Road. On Rouncey Road, a midblock narrowing has been constructed at the Trans-Canada Trail crossing (approximately 400m south of the Abbott Street East/Cranesbill Road/Rouncey Road roundabout).

2.1.6 Transit

The locations of OC Transpo bus stops relevant to 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 Serviced
#5421	North side of Castlefrank Road, east of Glamorgan Drive	161, 168, 267, 681
#5425	East side of Glamorgan Drive, south of Castlefrank Road	161, 168, 267, 681
#6720	East side of Rouncey Road, south of Abbott Street East	67
#6721	North side of Abbott Street East, east of Cranesbill Road	67
#6722	North side of Abbott Street East, west of Terry Fox Drive	67

Figure 3: OC Transpo Bus Stop Locations

Table 2: OC Transpo Route Information

Route	From ↔ To	Frequency
67	Terry Fox & Tunney's Pasture ↔ Cope	All day service, Monday to Friday; 60-minute headways
161	Bridlewood ↔ Terry Fox	All day service, Monday to Friday; 30- to 60-minute headways
168	Bridlewood ↔ Terry Fox	All day service, seven days a week (only serves study area on weekends); 30-minute headways
267	Tunney's Pasture ↔ Glen Cairn	Peak period service in peak direction on weekdays; 30-minute headways
681	Bell H.S. ↔ Kanata	School route; operates at select times on school days

Future Transit ('New Ways to Bus')

OC Transpo's future transit network (referred to as 'New Ways to Bus') will include changes to bus service within the study area. A summary of the changes to the above routes is provided below:

- Route 67: no changes are proposed;
- Route 161 will no longer serve the Hazeldean Mall, and will only serve stops #5421 and #5425 during peak periods;
- Route 168 will no longer serve the subject site;
- Route 267 will be removed and replaced with Route 60 (between Tunney's Pasture and Castlefrank Road between Sheldrake Drive and Glamorgan Drive) and Route 161 (south of Castlefrank Road/Sheldrake Drive).

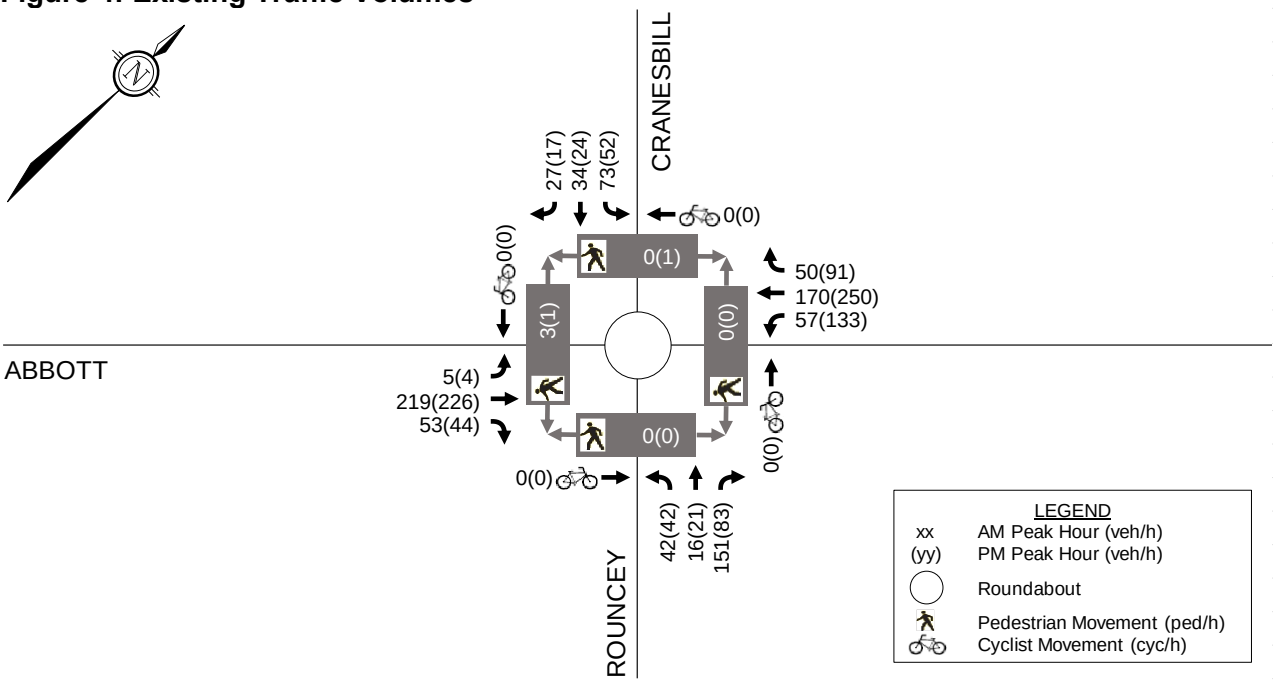
2.1.7 Existing Traffic Volumes

A weekday traffic count completed by the City of Ottawa has been used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at Abbott Street East/Cranesbill Road/Rouncey Road. The count was completed on Wednesday, January 8, 2025.

It is noted that active transportation volumes observed in the above traffic counts may be lower than typical conditions, as the counts were conducted outside of the warmest months. Based on the traffic count data, the average annual daily traffic (AADT) of Abbott Street East along the subject site's frontage is approximately 9,600 vehicles per day (vpd).

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 full 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 *Revised TIA Guidelines* as 'more than six collisions in five years' for any one movement. The number of collisions at each intersection from January 1, 2018 to December 31, 2022 is summarized in **Table 3**.

Table 3: Reported Collisions

Intersection or Segment	Impact Types					Total
	Angle	Rear End	Sideswipe	Turning Mvmt	SMV[1]/ Other	
Abbott Street East/ Cranesbill Road/Rouncey Road	3	1	-	-	3	**7**
Abbott Street East btwn Cranesbill Road & Terry Fox Drive	1	-	-	-	-	**1**

1. SMV = Single Motor Vehicle

Abbott Street East/Cranesbill Road/Rouncey Road
A total of seven collisions were reported at this roundabout over the last five years, consisting of three angle impacts, one rear-end impact, and three single vehicle/other impacts. Two collisions resulted in non-fatal injuries. Four of the seven collisions (57%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

Abbott Street East between Cranesbill Road & Terry Fox Drive
One collision was reported along this segment over the last five years, which was classified as an angle impact. This collision involved a cyclist and resulted in non-fatal injuries. The collision did not occur in poor driving conditions.

2.2 Planned Conditions

2.2.1 Planned Transportation Projects

The City's *2013 Transportation Master Plan (TMP)* does not identify any study area roadways within its 2031 Rapid Transit and Transit Priority (RTTP) Network. Based on the 2031 Network Concept, the nearest corridors identified in the RTTP Network include Hazeldean Road and Terry Fox Drive north of Hazeldean Road (transit priority corridors with isolated measures), and Robert Grant Avenue (bus rapid transit with at-grade crossings).

The *2013 TMP* does not identify any study area roadways to be upgraded within the 2031 Roadway Network Concept or 2031 Affordable Roadway Network. Based on the 2031 Network Concept, a widening of Terry Fox Drive from two lanes to four is identified between Winchester Road and Eagleson Road. The Environmental Assessment (EA) for this widening has been completed. West of the study area, the extension of Robert Grant Avenue to connect from Abbott Street East to Palladium Drive is identified in the 2031 Affordable Network and is under construction.

Approved by City Council in April 2023, the City's *TMP – Part 1* includes a list of upcoming active transportation projects, and supersedes the City's *2013 Ottawa Cycling Plan* and *2013 Ottawa Pedestrian Plan*. The *TMP – Part 1* identifies no pedestrian infrastructure projects within the vicinity of the subject site. The cycling infrastructure projects list identifies a pathway along the Carp River between Terry Fox Drive and Hazeldean Road (north of the study area), and multi-use pathway (MUP) connections along Terry Fox Drive from Westphalian Avenue to Condado Crescent (south of the study area).

2.2.2 Other Area Developments

Based on a review of the City's Development Application Search Tool, there are multiple other developments that were significant enough to include traffic projections, and are in proximity of the subject site that are under construction, approved, or are in the approval process. These developments are summarized as follows.

Trail View Subdivision (950 Terry Fox Drive)
A Transportation Impact Study (TIS) was prepared by Novatech in October 2014, in support of the Trail View subdivision consisting of 108 single-detached homes, 77 condo dwellings, and 60 apartment dwellings. The subject site is Phase 5 of this subdivision. The TIS estimated buildout to occur in 2021.

Kizell Lands (5618 Hazeldean Road)
A TIA was prepared by Novatech in May 2020, in support of a subdivision consisting of 288 single-detached homes, 469 townhomes, 878 low-rise dwellings, 1,120 apartment dwellings, 351,334 ft^2 of retail space, a 580-student elementary school, and a 375-space park and ride. The TIA estimated buildout to occur in 2030.

5000 Robert Grant Avenue
A TIA was prepared by Parsons in March 2024, in support of a development consisting of 504 mid-rise or high-rise dwellings, and 2,185 ft^2 of retail space. The TIA estimated buildout to occur in 2025.

A map indicating the approximate location of each development is included in **Figure 5**.

2.3 Study Area and Time Periods

The study area for this report includes the boundary roadway Abbott Street East, as well as the roundabout at Abbott Street East/Cranesbill Road/Rouncey Road.

The selected time periods for this report 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 2027 and horizon year 2032 have been considered.

2.4 Access Design

An existing full-movement access to Abbott Street East is provided for the sales centre on-site. No modifications to the access are proposed as part of the subject development. The existing 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)(c) of the PABL identifies a maximum width requirement of 9m for any two-way private approach, and Section 107(1) of the ZBL identifies a minimum width requirement of 6m and maximum width requirement of 6.7m, for residential parking lots with 20 or more parking spaces. The existing access measures 6.7m at the street line, meeting all requirements.

Figure 5: Other Area Developments

Section 25(1)(m) of the PABL identifies minimum distances between a private approach and the nearest intersecting street line, for sites that abut or are within 46m of an arterial or major collector roadway. For residential buildings with 100 to 199 parking spaces, the minimum distance is 30m (measuring nearest edge to intersecting ROW). TAC's *Geometric Design Guide* identifies a minimum corner clearance of 25m (measuring nearest edge to nearest edge). The western edge of the existing access is approximately 60m from the Abbott Street East/Cranesbill Road/Rouncey Road roundabout, meeting these requirements.

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. The existing access is approximately 33m from the nearest property line, meeting this requirement.

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. The existing access has a grade of approximately 1.3% within the first 9m, meeting this requirement.

A review of stopping sight distance (SSD) and intersection sight distance (ISD) requirements at the proposed accesses has been conducted, in accordance with the minimum requirements outlined in TAC's *Geometric Design Guide*. For the purposes of this review, a design speed of 50 km/h has been assumed (i.e. 10 km/h greater than the posted speed limit of 40 km/h). Therefore, TAC outlines the following SSD and ISD requirements for the access to Abbott Street East:

- SSD: 65m required;
- ISD, looking right to turn left out of access: 105m required;
- ISD, looking left to turn right out of access: 95m required.

Clear sightlines are provided between the existing access and the Abbott Street East/Cranesbill Road/Rouncey Road roundabout to the west. As Abbott Street East is a relatively straight and flat roadway between Cranesbill Road/Rouncey Road and Terry Fox Drive, clear sightlines east of the existing access are also provided, as the existing street trees are young. It is anticipated that the required SSD and desired ISD will continue to be provided, as long as these street trees are trimmed and maintained.

TAC's *Geometric Design Guide* identifies minimum clear throat length requirements for accesses based on their land use. A clear throat length of 8m is required for accesses to collectors, when the access serves less than 100 apartments. The existing clear throat between the nearest parking space and the end of the curb radii of the existing access is approximately 8m.

The existing access is stop-controlled. In the event that congestion at the adjacent Abbott Street East/Cranesbill Road/Rouncey Road roundabout results in queueing that periodically blocks the access, any vehicles wishing to turn left out of the site have the option to instead to turn right and make a U-turn at the roundabout. Vehicles turning left into the site are projected to be minimal and infrequent, and would not cause queueing that extends back into the roundabout.

2.5 Development-Generated Travel Demand

2.5.1 Trip Generation

The number of peak hour person trips generated by the proposed development has been estimated using the *TRANS Trip Generation Manual*, which present peak period trip generation rates and mode shares for different types of housing for the AM and PM peak periods. The data is divided into trip generation 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 Low-Rise Multifamily Housing land use, the process of converting the trip generation estimates from peak period to peak hour is shown below. Traffic generated by the existing Trail View subdivision sales centre has not been deducted.

The *TRANS Trip Generation Manual* identifies the subject site as being located within the Kanata-Stittsville district, which has the following observed mode shares for low-rise multifamily housing during the peak periods:

- Auto Driver: 52% in AM peak, 58% in PM peak;
- Auto Passenger: 14% in AM peak, 17% in PM peak;
- Transit: 22% in AM peak, 17% in PM peak;
- Cyclist: 0% in AM peak, 0% in PM peak;
- Pedestrian: 11% in AM peak, 8% in PM peak.

The mode shares for this proposed development are assumed to generally follow the mode shares observed in Kanata-Stittsville. A single set of mode shares have been assumed for the purposes of this TIA, and can be summarized as: 55% driver, 15% passenger, 20% transit, 0% cyclist, and 10% pedestrian.

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
Low-Rise Multifamily Housing	AM: 1.35 PM: 1.58	61 units	25	57	*82*	56	40	*96*

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		**25**	**57**	***82***	**56**	**40**	***96***
Auto Driver	55%	14	31	*45*	31	22	*53*
Auto Passenger	15%	4	9	*13*	8	6	*14*
Transit	20%	5	11	*16*	11	8	*19*
Cyclist	0%	-	-	*0*	-	-	*0*
Pedestrian	10%	2	6	*8*	6	4	*10*

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	7	15	*22*	14	10	*24*
Auto Passenger	0.48	0.44	2	4	*6*	4	3	*7*
Transit	0.55	0.47	3	6	*9*	5	4	*9*
Cyclist	0.58	0.48	-	-	*0*	-	-	*0*
Pedestrian	0.58	0.52	1	3	*4*	3	2	*5*
Peak Hour Person Trips			**13**	**28**	***41***	**26**	**19**	***45***

From the previous table, the proposed development is estimated to generate 41 person trips (including 22 vehicle trips) during the AM peak hour, and 45 person trips (including 24 vehicle trips) during the PM peak hour.

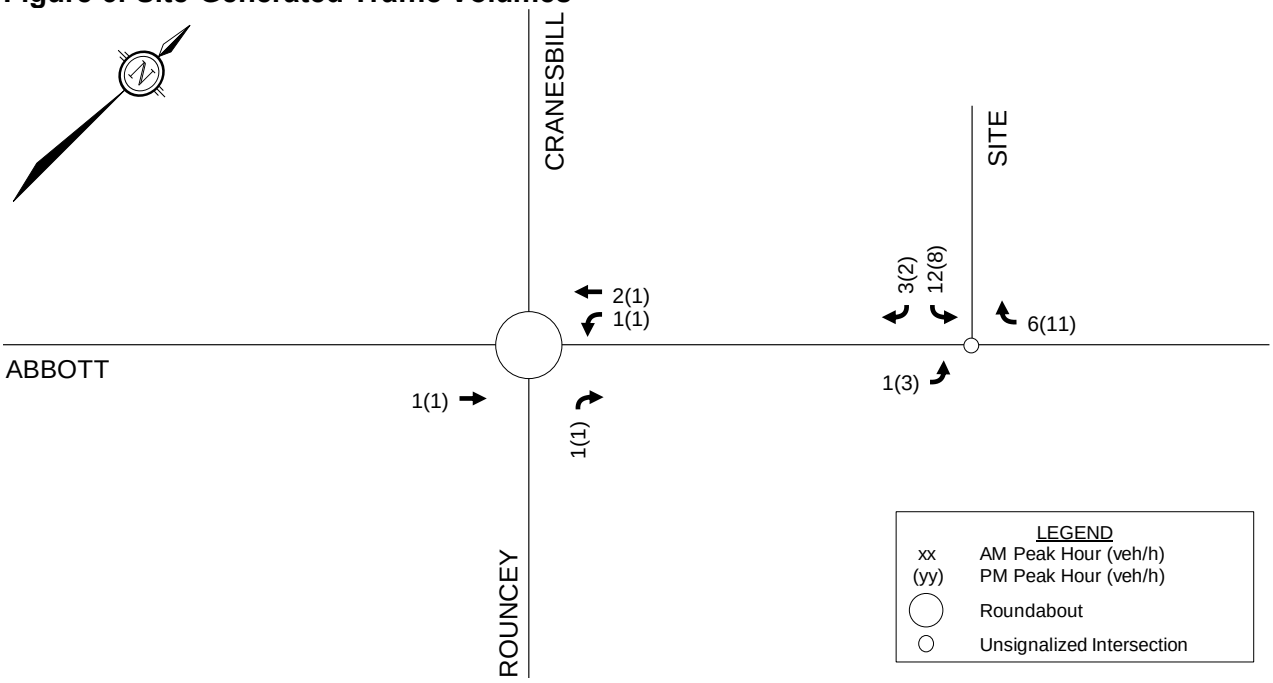
2.5.2 Trip Distribution and Assignment

A majority of trips generated by the proposed development are anticipated to enter/exit the study area via Terry Fox Drive to the east, as it provides direct access to Highway 417. A minority of trips have been assigned to Rouncey Road (to/from Cope Drive and Fernbank Road) and Abbott Street East (to/from Robert Grant Avenue and Stittsville Main Street). The distribution can be summarized as follows:

- 10% to/from the south via Rouncey Road;
- 80% to/from the east via Abbott Street East;
- 10% to/from the west via Abbott Street East.

Based on the above, the distribution of site-generated traffic volumes to the study area intersections are shown in **Figure 6**.

Figure 6: Site-Generated Traffic Volumes



2.6 Exemptions Review

This module reviews possible exemptions from the final TIA, as outlined in the *2023 Revised TIA Guidelines*. The applicable exemptions for this site are shown in **Table 7**.

Table 7: TIA Exemptions

Module	Element	Exemption Criteria	Status
4.1 Development Design	*4.1.2* Circulation and Access	• Required for site plan control and zoning by-law amendment applications	Not Exempt
	4.1.3 New Street Networks	• Required for draft plan of subdivision applications	Exempt
4.2 Parking	*All elements*	• Required for site plan control and zoning by-law amendment applications	Not Exempt
4.6 Neighbourhood Traffic Calming	*All elements*	• If all of the following criteria are met: 1. Access is provided to a collector or local roadway 2. Application is for zoning by-law amendment or draft plan of subdivision 3. Development generates more than 75 vehicle trips 4. Site trip infiltration is expected, and site-generated traffic will increase peak volumes by 50% or more along the route between the site and an arterial 5. The subject street segment is adjacent to two or more of the following significant sensitive land uses: o School (within 250m walking distance) o Park o Retirement/older adult facility o Licensed child care centre o Community centre o 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	• Required when proposed development generates more than 75 transit trips	Exempt
	4.7.2 Transit Priority Requirements	• Required when proposed development generates more than 75 vehicle trips	Exempt
4.8 Network Concept	*All elements*	• Required when proposed development generates more than 200 peak hour person trips in excess of the equivalent volume permitted by the established zoning	Exempt
4.9 Intersection Design	*All elements*	• 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 4.4: Access Design
- Module 4.5: Transportation Demand Management

3.0 BACKGROUND NETWORK TRAVEL DEMAND

3.1 Other Area Developments

As discussed in Section 2.2.2, there are other developments in proximity of the subject site that are under construction, approved, or are in the approval process. Relevant excerpts of the studies/projections in support of these developments are included in **Appendix F**.

Trail View Subdivision (950 Terry Fox Drive)
A Transportation Impact Study (TIS) was prepared by Novatech in October 2014, in support of the Trail View subdivision consisting of 108 single-detached homes, 77 condo dwellings, and 60 apartment dwellings. The subject site is Phase 5 of this subdivision. The TIS estimated buildout to occur in 2021. Single-detached homes and condominiums within this subdivision are partially constructed. In the 2014 TIS, minimal traffic volumes were distributed to the west via Abbott Street East (i.e. one to three vehicles during the peak hours), with most volumes distributed to the Terry Fox Drive/Abbott Street East intersection. Therefore, 100% of the projected volumes distributed to the west via Abbott Street East have been added to the 2027 and 2032 background volumes.

Kizell Lands (5618 Hazeldean Road)
A TIA was prepared by Novatech in May 2020, in support of a subdivision consisting of 288 single-detached homes, 469 townhomes, 878 low-rise dwellings, 1,120 apartment dwellings, 351,334 ft^2 of retail space, a 580-student elementary school, and a 375-space park and ride. The TIA estimated buildout to occur in 2030, and included traffic projections for two scenarios. Scenario One projections, which assumed the subdivision would adhere to the density requirements of the Fernbank CDP, have been considered for this study. Relevant to this TIA, traffic generated by the Kizell lands was distributed to Abbott Street East and the extension of Cranesbill Road. For the purposes of this study, 100% of projected volumes distributed to Abbott Street East are assumed to be captured at Abbott Street East/Cranesbill Road/Rouncey Road. These volumes have been added to the 2032 background volumes.

5000 Robert Grant Avenue
A TIA was prepared by Parsons in March 2024, in support of a development consisting of 504 mid-rise or high-rise dwellings, and 2,185 ft^2 of retail space. The TIA estimated buildout to occur in 2025. Traffic generated by this development have been added to the 2027 and 2032 background volumes.

3.2 General Background Growth Rate

Consistent with other traffic studies prepared for parcels within the Fernbank community, a 2% annual growth rate has been applied to the existing through volumes on Abbott Street East. No growth has been applied to Cranesbill Road or Rouncey Road for the purposes of this study.

3.3 Future Traffic Conditions

The figures below present the following future traffic conditions within the study area:

- Other area development-generated volumes in 2027 are shown in **Figure 7**;
- Other area development-generated volumes in 2032 are shown in **Figure 8**;
- Background traffic volumes in 2027 are shown in **Figure 9**;
- Background traffic volumes in 2032 are shown in **Figure 10**.

Figure 7: 2027 Other Area Development-Generated Traffic Volumes

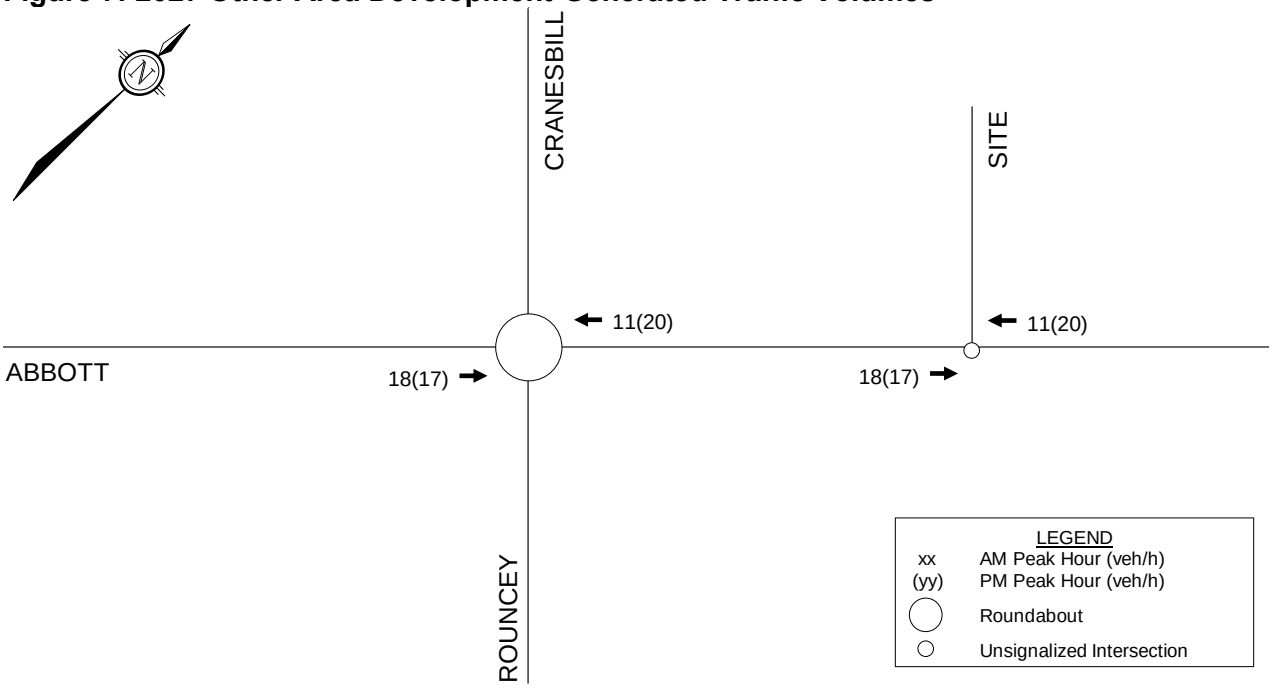


Figure 8: 2032 Other Area Development-Generated Traffic Volumes

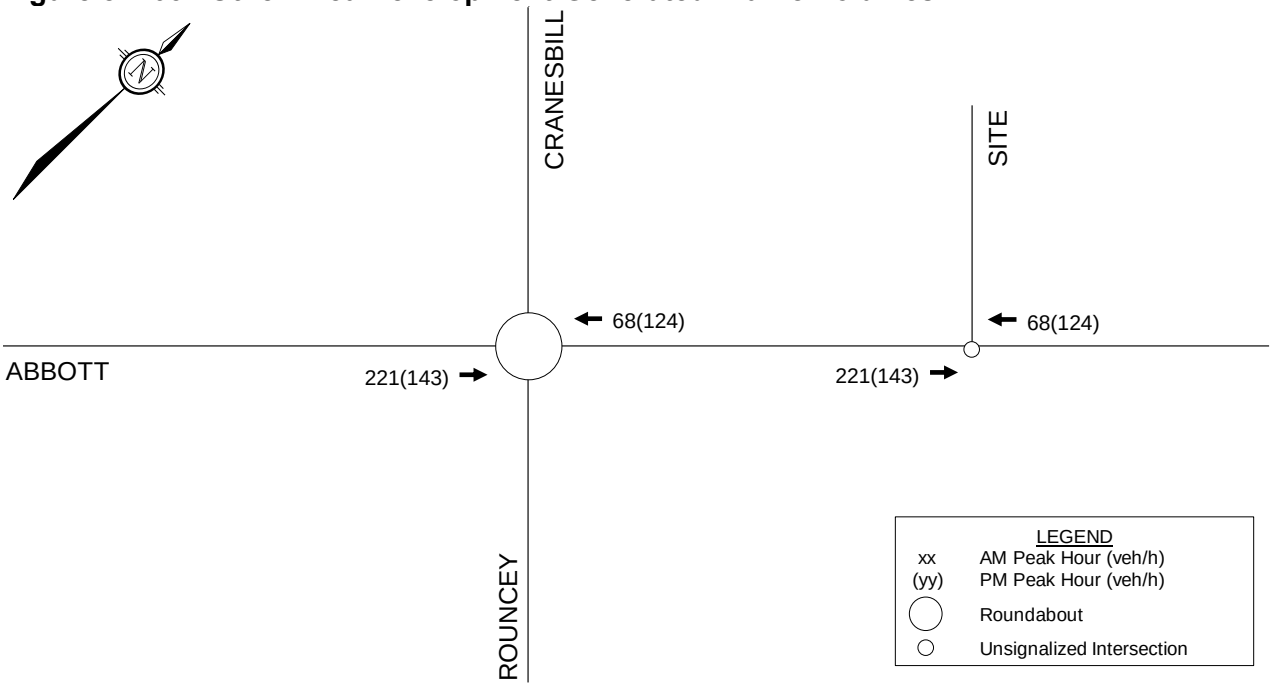


Figure 9: 2027 Background Traffic Volumes

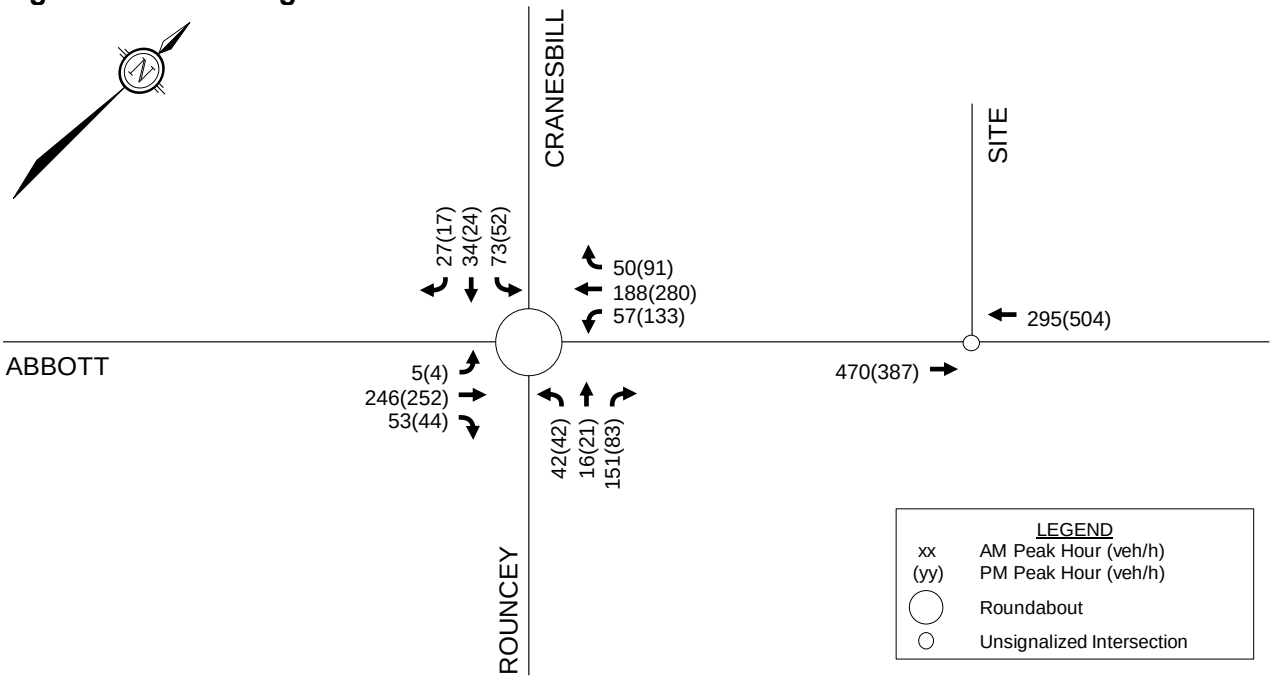
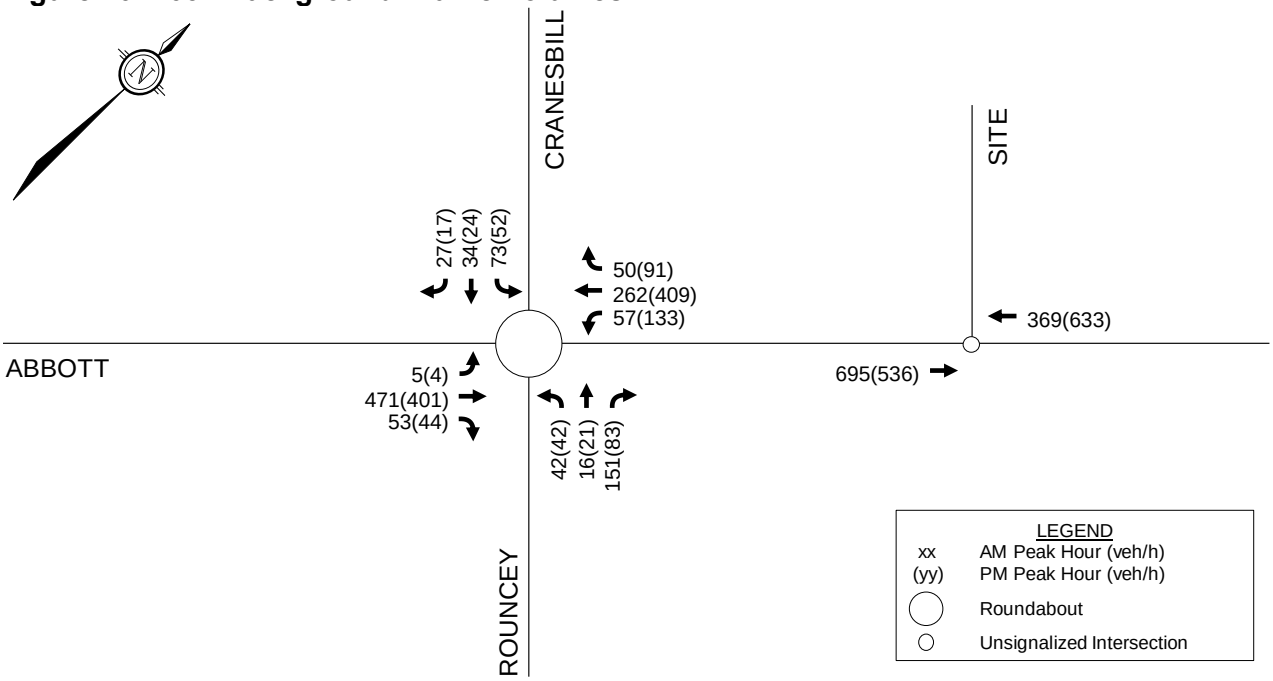


Figure 10: 2032 Background Traffic Volumes



3.4 Demand Rationalization

This module identifies 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 7**).

4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

On-site pedestrian walkways will be provided to each building, and up to each entrance. The network of on-site walkways will connect to the existing sidewalk on Abbott Street East. The sidewalk across the existing access is continuous, per City of Ottawa standards.

Bicycle parking will be provided in exterior areas adjacent to each proposed building. A total of 30 bike parking spaces will be provided. The required number of bike parking spaces is reviewed in Section 4.2.

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. The subject site is within 400m walking distance of OC Transpo bus stops #6720, #6721, and #6722 (served by route 67), and within 600m of stops #5421 and #5425 (served by routes 161, 168, 267, and 681).

A review of the City's *Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist* has been conducted. A copy of the residential TDM checklist is included in **Appendix G**. All applicable required TDM-supportive design and infrastructure measures in the TDM checklist are met. In addition to the required measures, the proposed development also provides the following 'basic' or 'better' measures:

- 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.

4.1.2 Circulation and Access

The on-site fire route will include the existing entrance and its drive aisle. Any fire trucks entering the site will drive forward in and reverse out onto Abbott Street East. Off-site, fire trucks responding to Buildings 1 and 2 can respond curbside on Abbott Street East, and fire trucks responding Buildings 3, 4, and 5 can respond curbside on Adstock Heights.

No dedicated loading spaces are proposed as part of the development. Moving trucks loading and unloading can access the hammerheads adjacent to Building 5 and the existing sales centre. Garbage collection will occur adjacent to the garage that is located between the existing sales centre and the proposed residential building at the northwestern corner of the site. Moving and garbage trucks will be able to enter and exit the site in a forward motion.

Turning movement figures have been prepared for fire trucks and a Medium Single Unit (MSU) design vehicle. An MSU vehicle has been selected to represent both moving trucks and garbage trucks. Turning movements are included in **Appendix H**.

4.2 Parking

The subject site is located within Area C on Schedules 1 and 1A of the City's ZBL. The required parking supply and proposed parking supply for the proposed residential development are summarized in **Table 8**.

Table 8: Required and Proposed Parking

Land Use	Rate	Units	Required	Provided
Minimum Vehicle Parking (Section 101/102 of ZBL)				
Dwelling, Low-Rise	1.2 spaces per dwelling (residents)	61 units	73	87
	0.2 spaces per dwelling (visitors)		12	15
		Total	**85**	**102**
Minimum Bicycle Parking (Section 111 of ZBL)				
Apartment Dwelling	0.5 spaces per dwelling	61 units	31	31

Based on the previous table, the proposed number of vehicle and bicycle parking spaces meets the requirement. A total of two accessible parking spaces are proposed for the development, including maintaining the existing accessible parking space adjacent to the sales centre. This meets the *City of Ottawa Accessibility Design Standards* requirement of one Type B space for the visitor parking, where the visitor parking supply is between 13 and 25 spaces.

4.3 Boundary Streets

This section provides a review of the boundary frontage to Abbott Street East, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines* were used to evaluate the levels of service for each alternative mode of transportation. The boundary streets have been evaluated based on the targets for roadways within the General Urban Area.

A detailed segment MMLOS review is included in **Appendix I**. A summary of the segment MMLOS analysis is provided below in **Table 9**.

Table 9: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Abbott Street East	B	C	A	D	F	-	B	-

From the previous table, Abbott Street East meets the target pedestrian level of service and bicycle level of service. No targets are identified for transit level of service or truck level of service.

4.4 Transportation Demand Management

4.4.1 Context for TDM

The proposed development consists of a total of 61 low-rise dwellings. All dwellings are anticipated to be two-bedroom units.

4.4.2 Need and Opportunity

The subject site is located within the Fernbank Community Design Plan area, and is designated as 'Neighbourhood' and 'Corridor – Minor' (Abbott Street East) on Schedule B5 of the City of Ottawa's *Official Plan*. The implemented zoning for the property is 'Residential Fourth-Density' (R4S[2351]).

As first discussed in Section 2.5.1, the assumed driver share of 55% for the proposed development is based on the surveyed residential driver shares of the Kanata-Stittsville district (as outlined in the *TRANS Trip Generation Manual*). The driver share of the proposed development may reduce in the future as the adjacent communities develop, more amenities and nearby commercial opportunities are built, and transit service improves in the area. Failure to meet the assumed driver share by 10% would equate to an additional two to three vehicle trips during each peak hour.

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 residential checklist is included in **Appendix G**. The list of measures to be considered is summarized as follows:

- 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.

5.0 CONCLUSIONS AND RECOMMENDATIONS

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

Site-Generated Traffic

- The proposed development is estimated to generate 41 person trips (including 22 vehicle trips) during the AM peak hour, and 45 person trips (including 24 vehicle trips) during the PM peak hour.

Development Design and Parking

- On-site pedestrian walkways will be provided to each building, and up to each entrance. The network of on-site walkways will connect to the existing sidewalk on Abbott Street East. The sidewalk across the existing access is continuous, per City of Ottawa standards.

- Bicycle parking will be provided in exterior areas adjacent to each proposed building. A total of 31 bike parking spaces will be provided.

- The on-site fire route will include the existing entrance and its drive aisle. Any fire trucks entering the site will drive forward in and reverse out onto Abbott Street East. Off-site, fire trucks responding to Buildings 1 and 2 can respond curbside on Abbott Street East, and fire trucks responding Buildings 3, 4, and 5 can respond curbside on Adstock Heights.

- No dedicated loading spaces are proposed as part of the development. Moving trucks loading and unloading can access the hammerheads adjacent to Building 5 and the existing sales centre. Garbage collection will occur adjacent to the garage that is located between the existing sales centre and the proposed residential building at the northwestern corner of the site.

- The proposed number of vehicle and bicycle parking spaces meets the requirement. A total of two accessible parking spaces are proposed for the development, including maintaining the existing accessible parking space adjacent to the sales centre. This meets the minimum requirements outlined in the *City of Ottawa Accessibility Design Standards*.

Boundary Streets

- Abbott Street East meets the target pedestrian level of service and bicycle level of service. No targets are identified for transit level of service or truck level of service.

Transportation Demand Management (TDM)

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

- The list of measures to be considered by the proponent is summarized as follows:
  - 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.

NOVATECH

Prepared by:

Joshua Audia, P.Eng.
Project Engineer | Transportation

Reviewed by:

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

APPENDIX A

Preliminary Site Plan

NORTH

UNFINISHED MANHOLES — FOR LOCATION PURPOSES ONLY

PRIVATE
COMMUNAL AMENITY
(328m²)

BUILDING 1
12 Stacked Flats

BUILDING 2
12 Stacked Flats

BUILDING 3
12 Stacked Flats

BUILDING 4
12 Stacked Flats

BUILDING 5
12 Stacked Flats

GARAGE
285m²
(13 spaces)

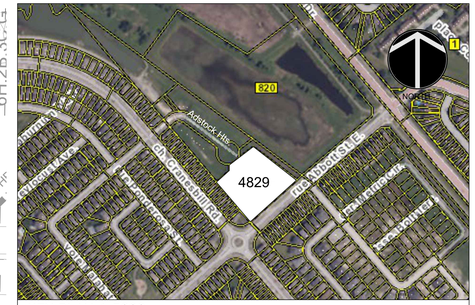
Opt.
Organics Waste
Storage

EXISTING GARAGE

EXISTING SALES
CENTRE

rue Abbott Street East

PHASE 1



KEY PLAN 1:5000

SITE DATA - BLOCK 123

SITE STATISTICS *(# OF UNITS & GROSS BUILDING FOOTPRINT AREA)*

BLOCK 1	12 UNITS	394m²
BLOCK 2	12 UNITS	394m²
BLOCK 3	12 UNITS	394m²
BLOCK 4	12 UNITS	394m²
BLOCK 5	12 UNITS	394m²
ACCESSORY GARAGE		285m²
EXISTING OFFICE		319m²
TOTAL	60 UNITS	2,574m²

LOT COVERAGE

TOTAL LOT AREA:	8,155m²
TOTAL BUILDING FOOTPRINT AREA:	2,574m²
TOTAL LOT COVERAGE	31.6%
TOTAL HARD SURFACE AREA:	2,722m²
TOTAL LOT COVERAGE	33.4%
TOTAL LANDSCAPE AREA:	2,899m²
TOTAL LOT COVERAGE	35.5%

AMENITY AREA

TOTAL REQUIRED

6m² per dwelling unit:
60 UNITS x 6m² = 360m²

COMMUNAL AMENITY AREA:
50% of total required amenity area
360(0.5) = 180m²

PROVIDED

PRIVATE AMENITY AREA (BALCONIES)
60 UNITS x 7.4m² 444m²

COMMUNAL AMENITY AREA 328m²

TOTAL PROVIDED: 772m²

ZONING STATISTICS

ZONING: R4S[2351] - RESIDENTIAL FOURTH DENSITY ZONE

DWELLING TYPE: PUD - 60 STACKED FLATS

PARKING REQUIREMENTS - RESIDENTS

(PARKING PROVISIONS 2008-250 SECTION 101, 108, 111)

RESIDENTS REQUIRE
72 RESIDENT SPACES (60 X 1.2)

12 VISITORS (60 X 0.2)

84 SPACES TOTAL

BICYCLE
0.5 x 60 UNITS = 31 SPACES

PROVIDED
74 RESIDENT SPACES @ 2.6mx5.2m
13 GARAGE
15 VISITORS @ 2.6mx5.2m

102 TOTAL

BICYCLE
31 @ 0.6mx1.8m

PROJECT TEAM

Owner / Applicant
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METRIC HOMES (Project Builder)
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Kanata, ON, K2V 0L4

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email: a.mcauley@novatech-eng.com

Surveyor

no.	date	revision
4	2025-04-30	REVIEW & COORDINATION
3	2025-03-20	REVIEW & COORDINATION
2	2024-10-17	ISSUED FOR REVIEW
1	2024-09-26	ISSUED FOR REVIEW

METRIC HOMES

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Canada K1S 3K7

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F: 613-235-2005
E: mail@hobinarc.com

hobinarc.com

HOBIN ARCHITECTURE

project title
TRAIL VIEW VILLAGE
LOW-RISE STACKED DWELLINGS
4829 ABBOTT STREET E, STITTSVILLE, ONTARIO

drawing title
BLOCK 123
SITE PLAN

drawn	date	scale
TD	AUG 2024	1:250

project 2223

drawing no. SP-1

revision no.

#XX XXX

XXXX-XX-XX.dwg

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines TIA Screening

1. Description of Proposed Development

Municipal Address	4829 Abbott St E
Description of Location	NE of Abbott/Cranesbill/Rouncey
Land Use Classification	Low-Rise Stacked Dwellings
Development Size (units)	61 total (60 within 12-unit flats + 1 at existing sales centre)
Development Size square metre (m^2)	-
Number of Accesses and Locations	1 access to Abbott, 75m E of Cranesbill/Rouncey
Phase of Development	Ph5 of Trail View Subdivision (1 phase)
Buildout Year	2027

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

2. Trip Generation Trigger

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

Table notes:

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

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

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

3. Location Triggers

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

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

4. Safety Triggers

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

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

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

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

5. Summary

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

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

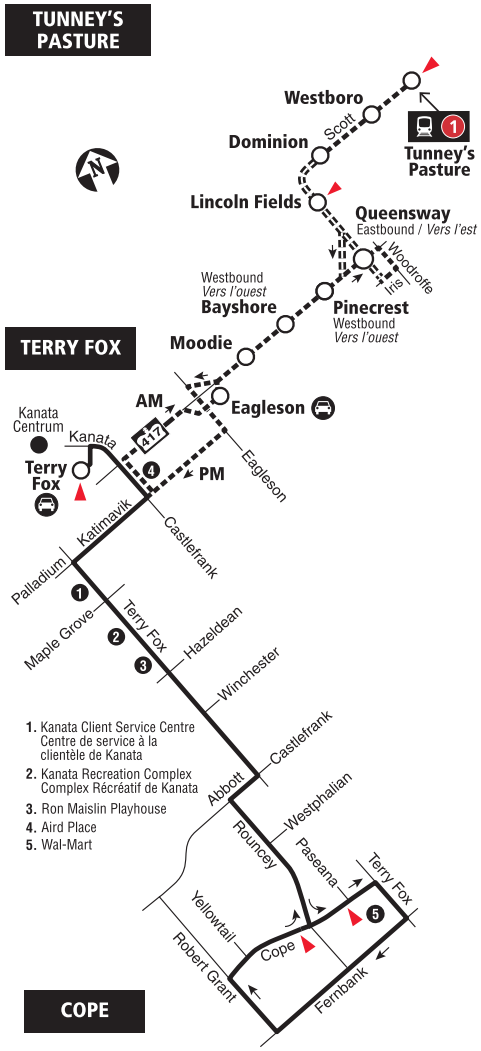
APPENDIX C

OC Transpo Route Maps

67 COPE
TUNNEY'S PASTURE
TERRY FOX

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

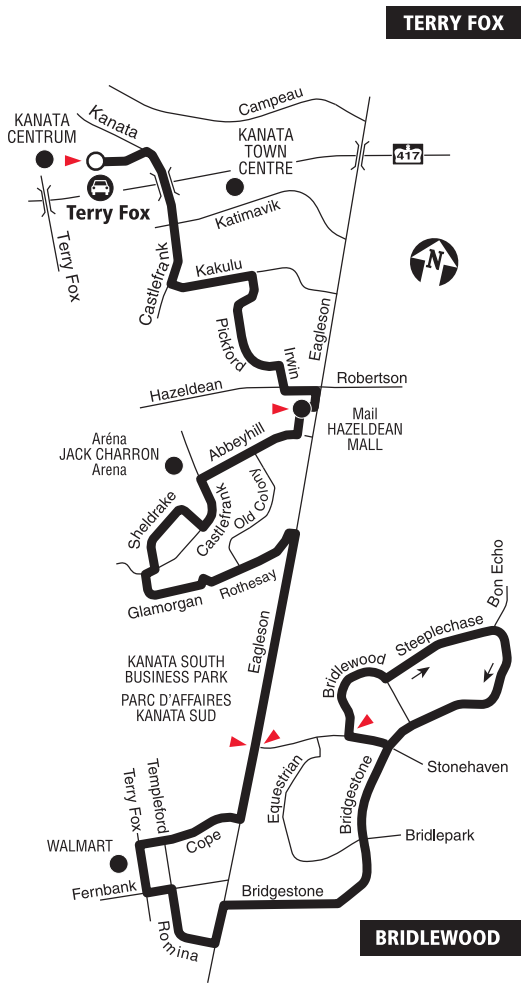
OC Transpo
INFO 613-560-5000
octranspo.com

161 TERRY FOX / BRIDLEWOOD

Local

Monday to Friday/ Lundi au vendredi

All day service. No weekend service
Service toute la journée.
Aucun service les fins de semaine



Station

Park & Ride / Parc-o-bus

Timepoint / Heures de passage

2019.06

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

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

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

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

Security / Sécurité **613-741-2478**

Effective June 29, 2015
En vigueur 29 juin 2015

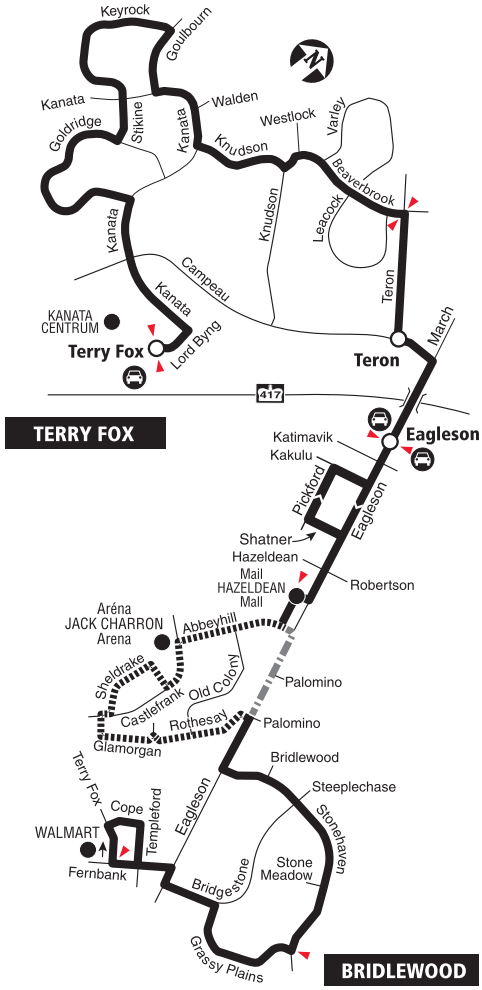
OC Transpo

INFO 613-741-4390
octranspo.com

168 TERRY FOX / BRIDLEWOOD

Local

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



Transitway Station / Station du Transitway
Saturday and Sunday only
Samedi et dimanche seulement
No weekend service
Aucun service la fin de semaine
Park & Ride / Parc-o-bus
Timepoint / Heures de passage

2019.06

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

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

Effective December 24, 2017
En vigueur 24 décembre 2017

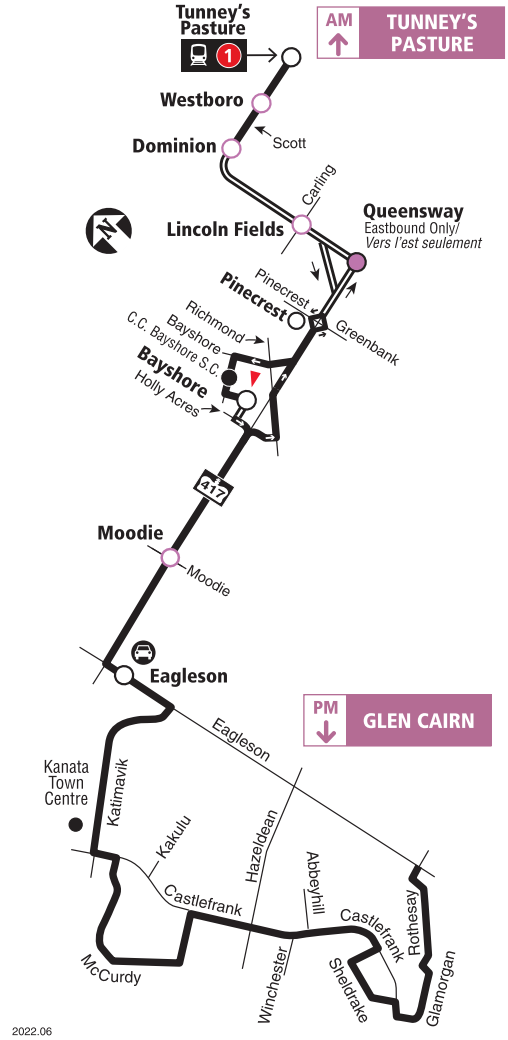
OC Transpo
INFO 613-741-4390
octranspo.com

267 Connexion

GLEN CAIRN
TUNNEY'S PASTURE

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

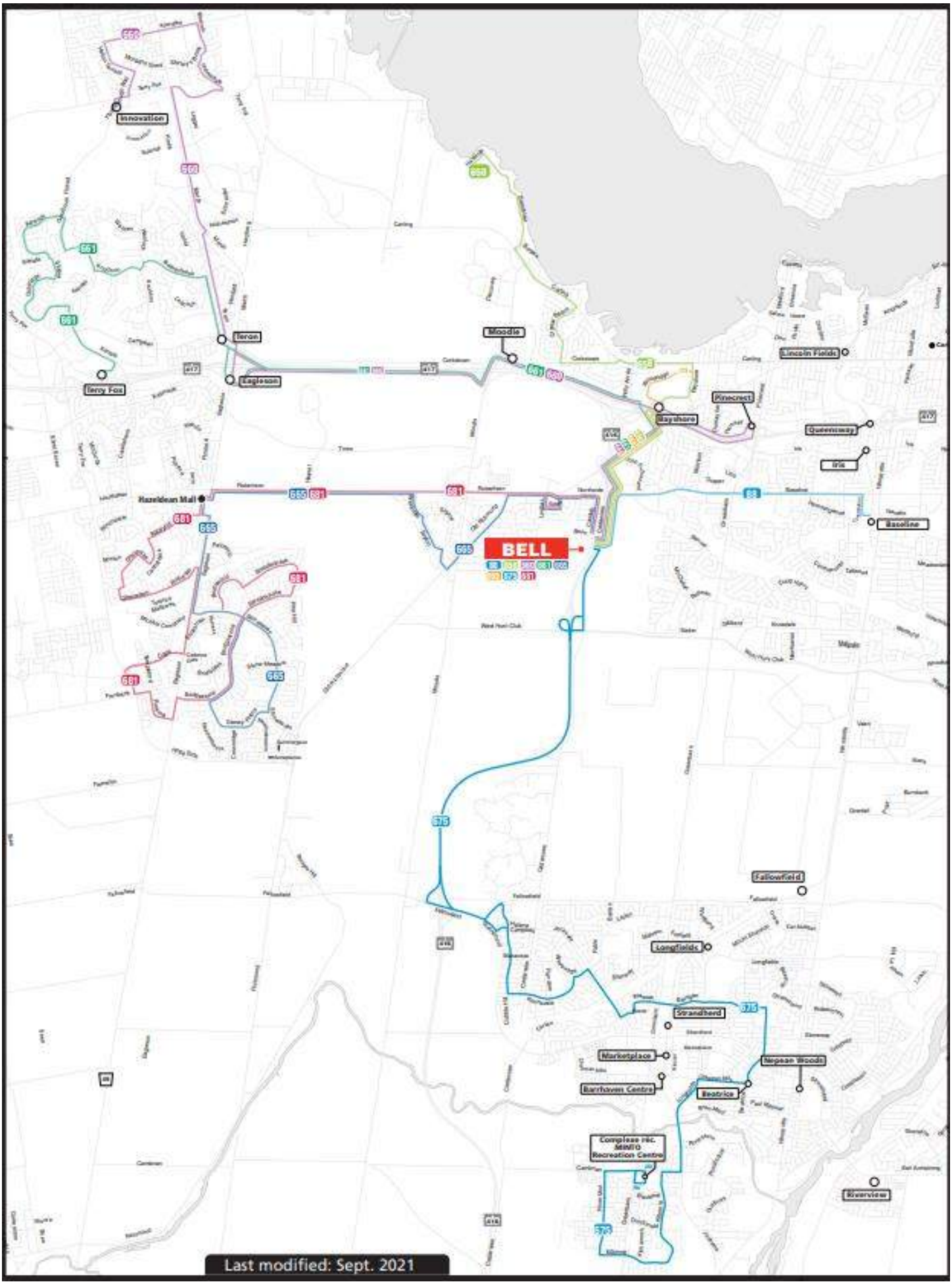
2022.06

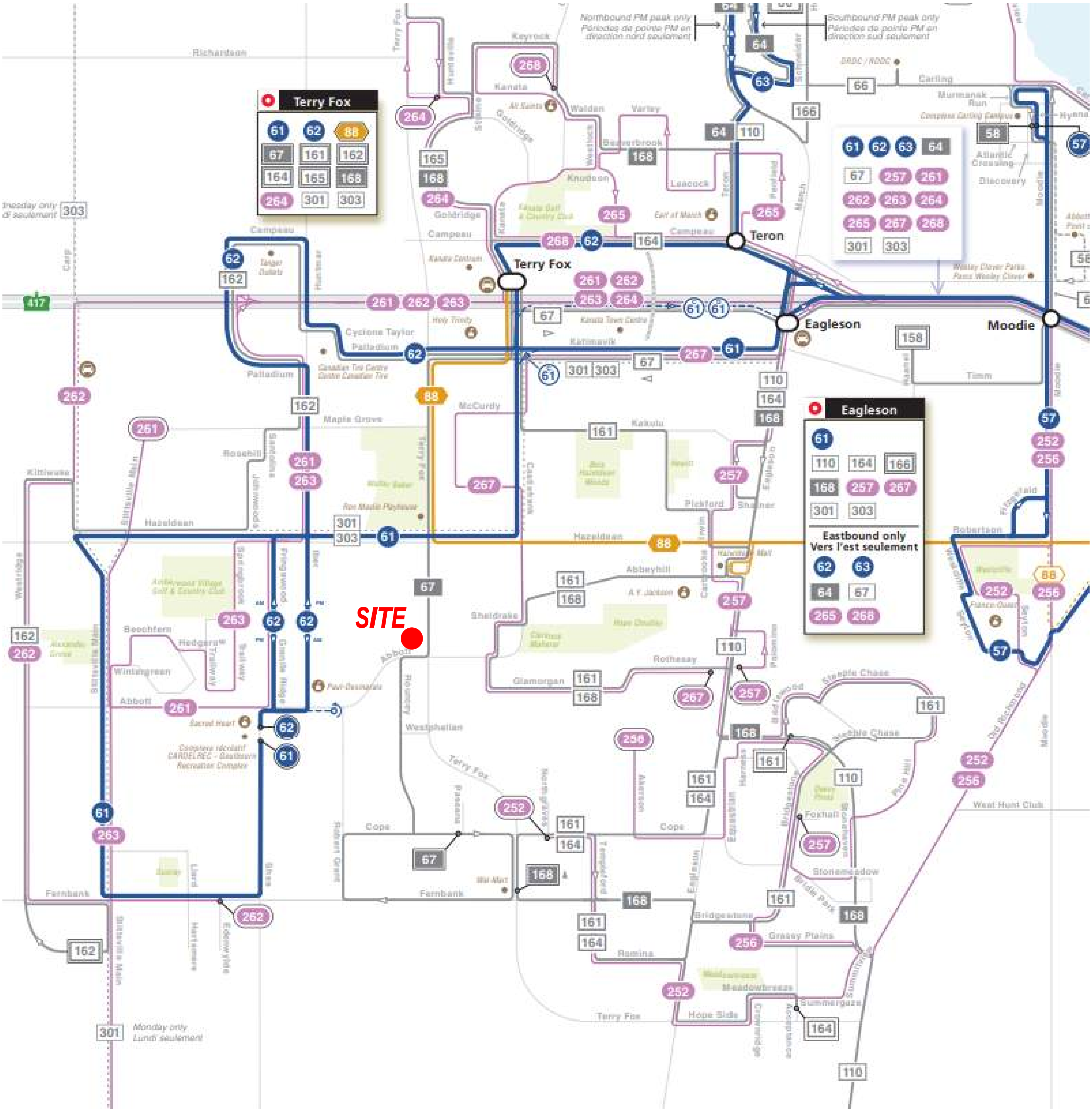
Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

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

OC Transpo
INFO 613-560-5000
octranspo.com


Innovation
Terry Fox
Teron
Eagleson
Moodie
Bayshore
Pinecrest
Lincoln Fields
Queensway
Iris
Baseline
Hazeldean Mall
BELL
Fallowfield
Longfields
Strandherd
Marketplace
Barrhaven Centre
Nepean Woods
Beatrice
Complexe récr. MINTO Recreation Centre
Riverview
Last modified: Sept. 2021


SITE
Terry Fox
Eagleson
Teron
Moodie
Eastbound only
Vers l'est seulement
Northbound PM peak only
Périodes de pointe PM en direction nord seulement
Southbound PM peak only
Périodes de pointe PM en direction sud seulement
Monday only
Lundi seulement
Richardson
Campeau
Palladium
Cyclone Taylor
Kanata
Knudson
Beaverbrook
Carling
Hazeldean
Abbeyhill
Sheldrake
Glamorgan
Rothesay
Westphalian
Cope
Fernbank
Terry Fox
Maple Grove
McCurdy
Kakulu
Pickford
Robertson
Abbott
Beechfern
Hedgerow
Wintergreen
Kittiwake
Westridge
Steeple Chase
Bridgestone
Grassy Plains
Meadowbreeze
Hope Side
Romina
West Hunt Club
Timm
Klondike
Discovery
Atlantic Crossing
Goldridge
Walden
Varley
Leacock
Keyrock
Rosehill
Stonemeadow
Foxhall
Summergaze

APPENDIX D

Traffic Count Data

Transportation Services - Traffic Services

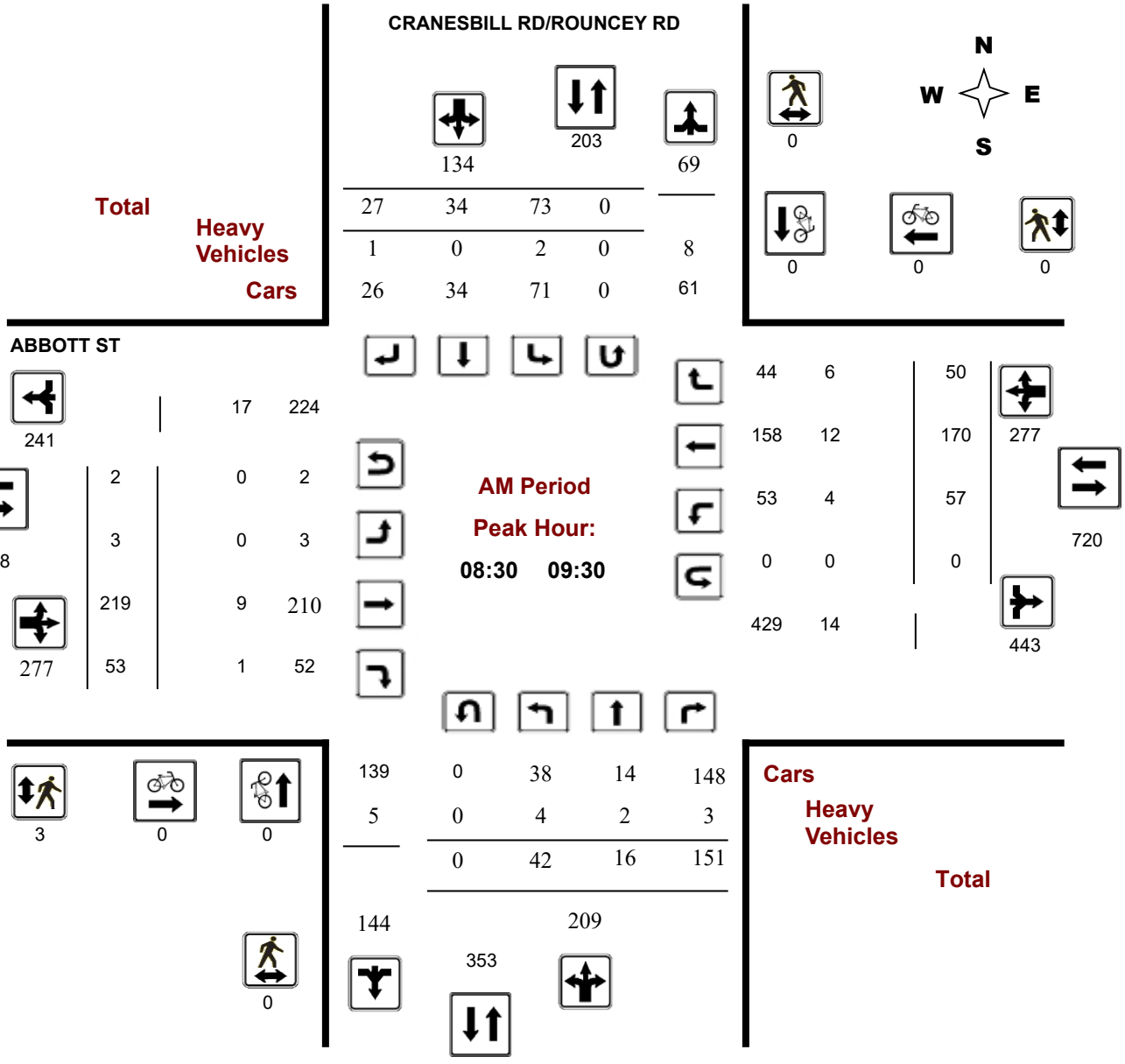
Turning Movement Count - Study Results

ABBOTT ST @ CRANESBILL RD/ROUNCEY RD

Survey Date: Wednesday, January 08, 2025 **WO No:** 42386

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

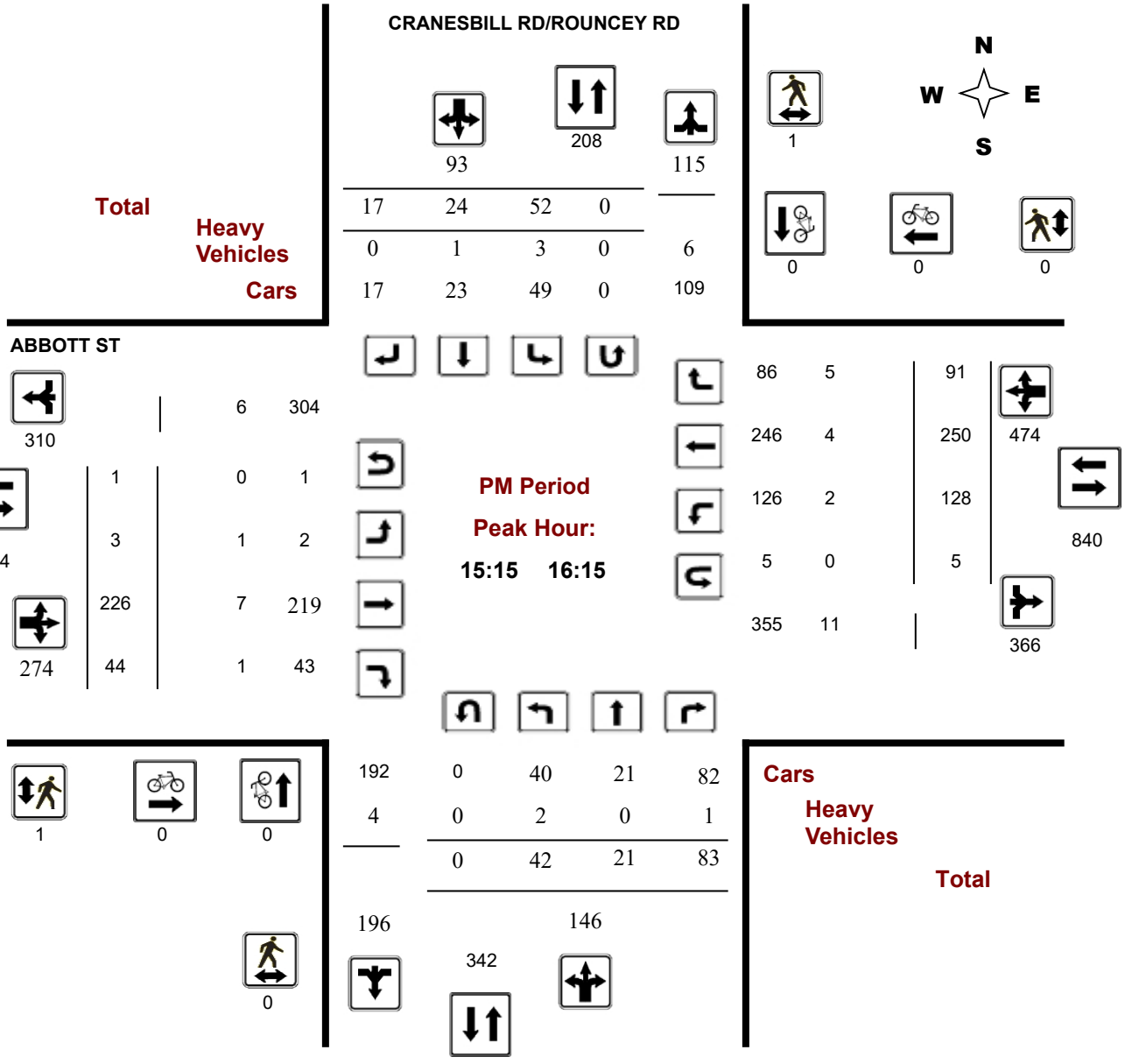
Turning Movement Count - Study Results

ABBOTT ST @ CRANESBILL RD/ROUNCEY RD

Survey Date: Wednesday, January 08, 2025 **WO No:** 42386

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ABBOTT ST @ CRANESBILL RD/ROUNCEY RD

Survey Date: Wednesday, January 08, 2025 **WO No:** 42386

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, January 08, 2025

Total Observed U-Turns

Northbound: 3 Southbound: 1

Eastbound: 7 Westbound: 15

AADT Factor

1.00

	CRANESBILL RD/ROUNCEY RD									ABBOTT ST									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	10	10	141	**161**	59	17	0	**76**	**237**	1	196	10	**207**	33	109	11	**153**	**360**	**597**
08:00 09:00	34	8	132	**174**	63	23	8	**94**	**268**	4	228	35	**267**	56	138	35	**229**	**496**	**764**
09:00 10:00	28	16	123	**167**	62	24	24	**110**	**277**	3	203	29	**235**	45	155	38	**238**	**473**	**750**
11:30 12:30	13	4	64	**81**	31	3	5	**39**	**120**	4	131	16	**151**	49	107	35	**191**	**342**	**462**
12:30 13:30	14	10	71	**95**	42	10	5	**57**	**152**	5	138	10	**153**	60	159	41	**260**	**413**	**565**
15:00 16:00	30	17	79	**126**	50	19	15	**84**	**210**	4	218	36	**258**	124	242	77	**443**	**701**	**911**
16:00 17:00	32	19	110	**161**	50	26	11	**87**	**248**	4	208	34	**246**	131	253	83	**467**	**713**	**961**
17:00 18:00	31	12	93	**136**	51	2	3	**56**	**192**	7	246	24	**277**	143	267	78	**488**	**765**	**957**
Sub Total	192	96	813	**1101**	408	124	71	**603**	**1704**	32	1568	194	**1794**	641	1430	398	**2469**	**4263**	**5967**
U Turns				**3**				**1**	**4**				**7**				**15**	**22**	**26**
Total	192	96	813	**1104**	408	124	71	**604**	**1708**	32	1568	194	**1801**	641	1430	398	**2484**	**4285**	**5993**
EQ 12Hr	267	133	1130	**1535**	567	172	99	**840**	**2374**	44	2180	270	**2503**	891	1988	553	**3453**	**5956**	**8330**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	267	133	1130	**1535**	567	226	129	**840**	**2374**	44	2180	270	**2503**	891	1988	553	**3453**	**5956**	**8330**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	350	174	1480	**2011**	743	296	169	**1100**	**3110**	58	2856	354	**3279**	1167	2604	724	**4523**	**7802**	**10912**
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, 2018 **To:** December 31, 2022

Location: ABBOTT ST @ CRANESBILL RD/ROUNCEY RD

Traffic Control: Roundabout **Total Collisions:** 7

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Dec-15, Sun,13:00	Clear	SMV unattended vehicle	P.D. only	Packed snow	East	Going ahead	Automobile, station wagon	Unattended vehicle	0
2019-Dec-16, Mon,07:37	Clear	Angle	P.D. only	Ice	West	Merging	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Construction equipment	Other motor vehicle	
2019-Dec-16, Mon,08:46	Clear	Angle	Non-reportable	Ice	West	Merging	Automobile, station wagon	Skidding/sliding	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jun-16, Tue,18:33	Clear	SMV other	Non-fatal injury	Dry	East	Going ahead	Pick-up truck	Curb	0
2020-Jun-19, Fri,23:58	Clear	SMV other	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Ran off road	0
2022-Jul-25, Mon,06:35	Clear	Angle	P.D. only	Dry	North	Merging	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Nov-16, Wed,15:20	Clear	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

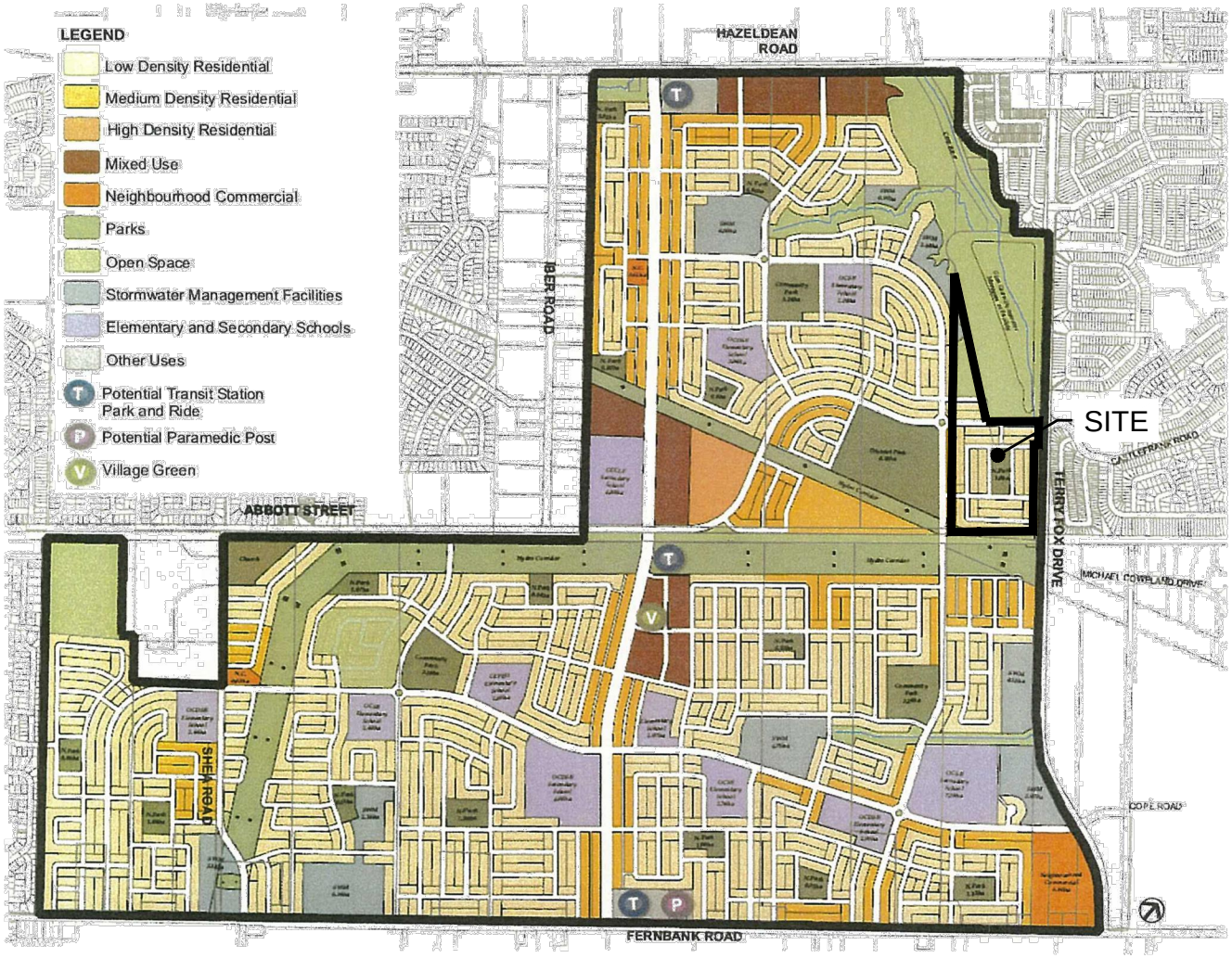
Location: ABBOTT ST btwn METRIC CIR & TERRY FOX DR

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Jun-24, Thu,17:57	Clear	Angle	Non-fatal injury	Dry	North	Changing lanes	Bicycle	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Cyclist	

APPENDIX F

Other Area Developments



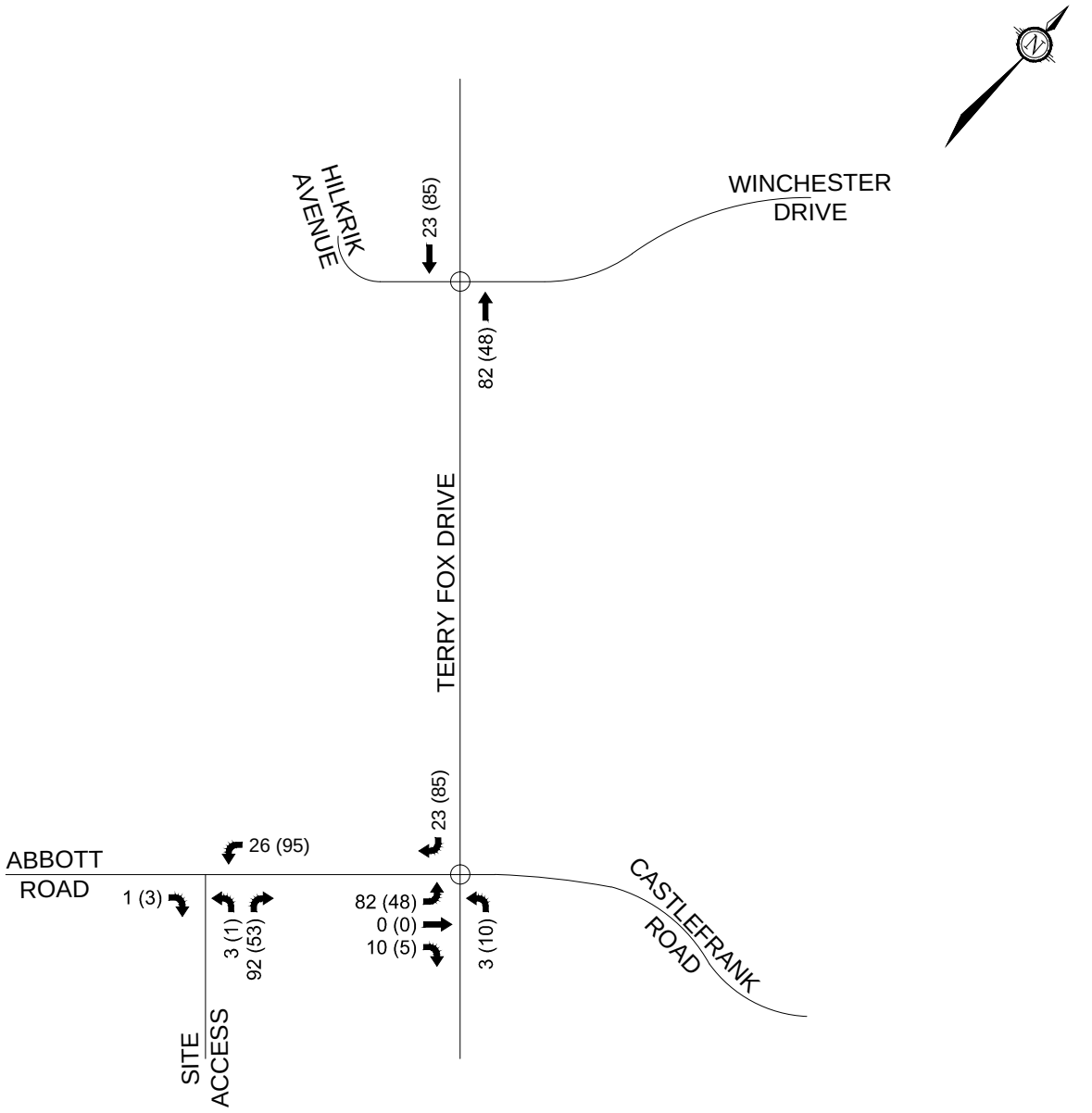
NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6

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

3558584 CANADA INC.
(SPB DEVELOPMENTS INC.)

FERNBANK COMMUNITY DESIGN PLAN

JUN 2014 110037 FIGURE 1



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Ottawa, Ontario, Canada K2M 1P6

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

3558584 CANADA INC.
(SPB DEVELOPMENTS INC.)

TOTAL PEAK HOUR SITE TRAFFIC VOLUMES

JUN 2014 110037 FIGURE 4

1.0 INTRODUCTION

This combined Community Transportation Study (CTS) and Transportation Impact Study (TIS) has been prepared in support of Zoning By-Law Amendment and Draft Plan of Subdivision applications for the lands located at 5618 Hazeldean Road. The subject lands are shown in **Figures 1** and **2** below and are henceforth referred to as the Kizell Lands.

Figure 1: Local Area Context

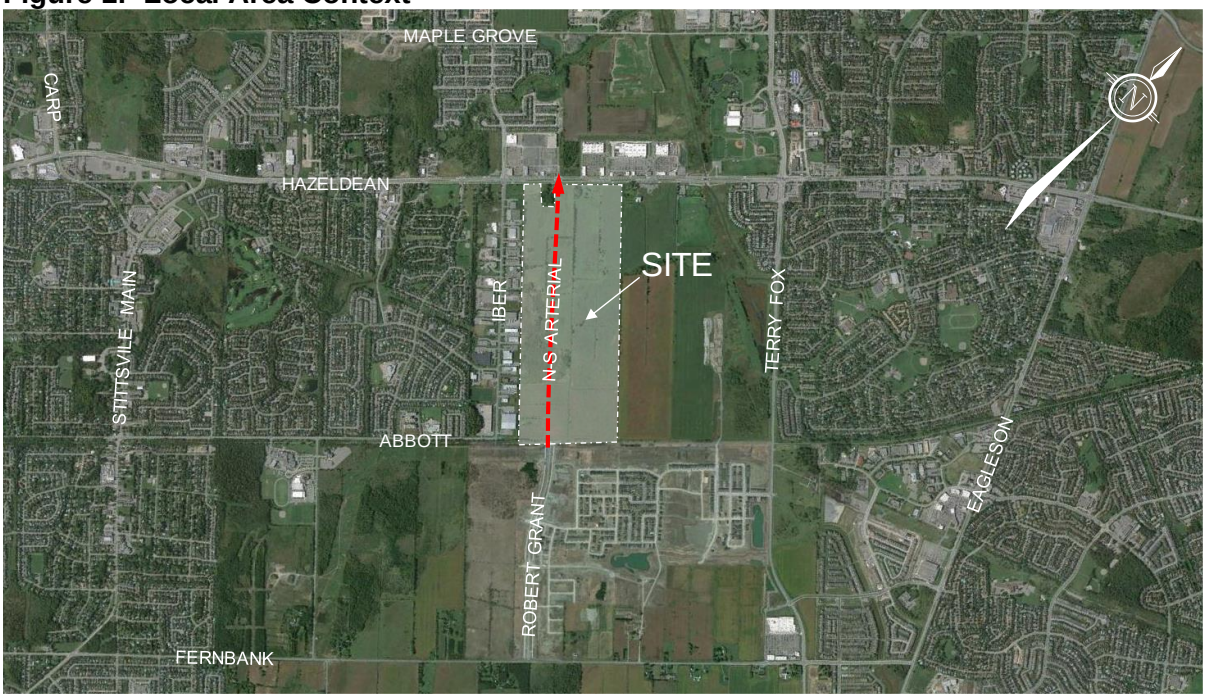


Figure 2: Hazeldean Road Context

Figure 6: Site Generated Traffic Volumes – Scenario One

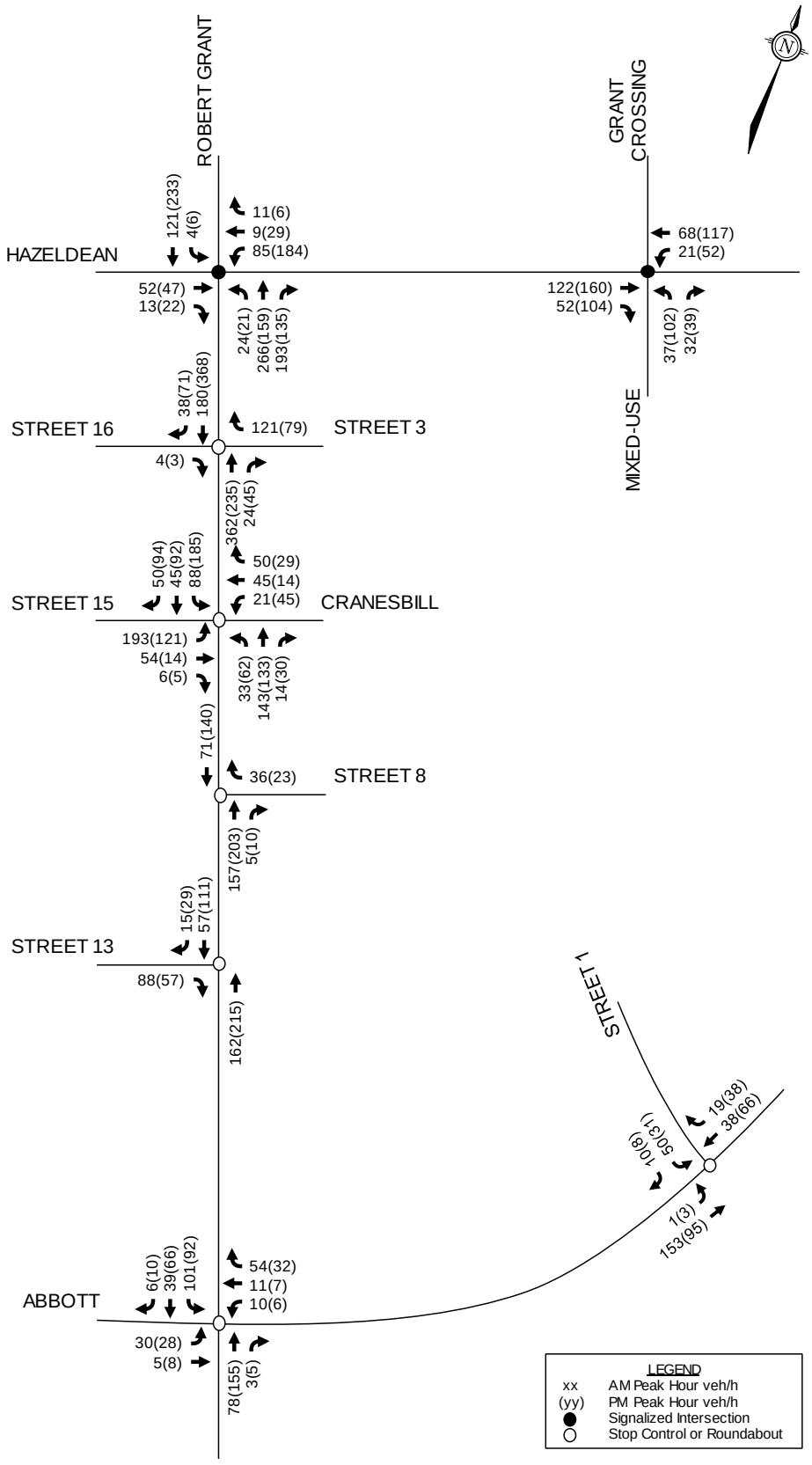
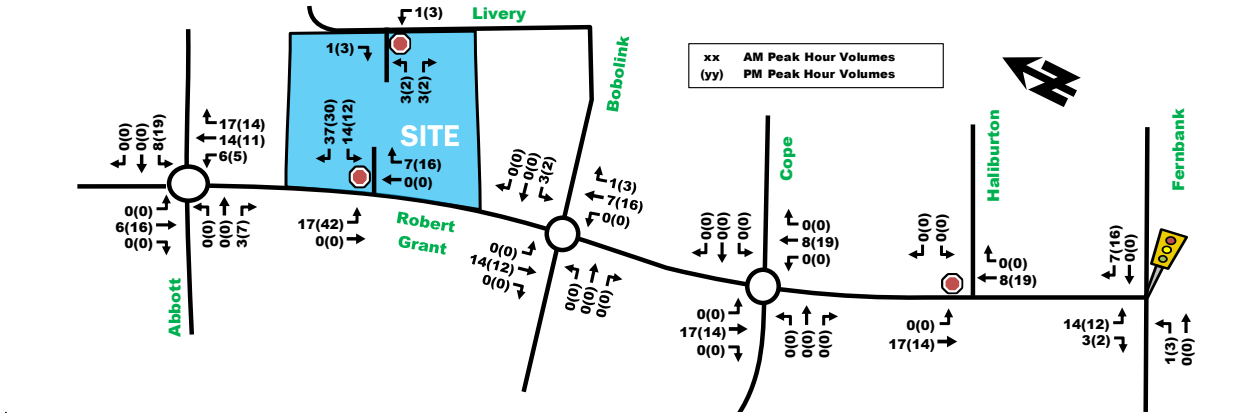


Figure 1: Local Context

The anticipated 'new' auto trips for the proposed development from **Table 8** were then assigned to the road network with the distribution shown above, as shown in **Figure 17**, for the total site-generated traffic for TRANS mode share.

Figure 17: Site-Generated Traffic Using TRANS Mode Shares



3.2. Background Network Traffic

3.2.1. Transportation Network Plans

Refer to **Section 2.1.3**: **Planned Conditions**.

3.2.2. Background Growth and Other Area Developments

The Stittsville district and areas south of the development are still ripe for future growth, with farm fields and empty lots destined for suburban developments. As described in **Section 2.1.3**, there are significant number of new developments proposed. A large amount of these future developments have been documented and will be layered on individually. Some parcels have a general proposed land use but have not been refined or finalized, with no future traffic volumes forecasted yet.

Overall, all the possible developable areas within a 1km radius have been captured in other area developments as shown in **Section 2.1.3**. Today, there are limited transit options available within the study area, promoting driving behaviors. Once the area matures and transit services increase, it is anticipated that less people will drive within the study area. For this reason, a 0% annual growth rate is considered adequate given that all known other area developments within the 1km radius have been accounted for in background volumes and commuting habits will likely change over time, conducive to other modes of transportation that are not driving.

3.2.3. Future Background Volumes

The total number of new other area development vehicle trips projected to use study area intersections have been illustrated in **Figure 18** and **Figure 19** for 2025 and 2030 respectively.

APPENDIX G

Transportation Demand Management

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

Legend

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

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

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

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☐ - N/A
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	☐
	2.3	**Bicycle repair station**	
BETTER	2.3.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses *(see Zoning By-law Section 94)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	☐

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

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

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

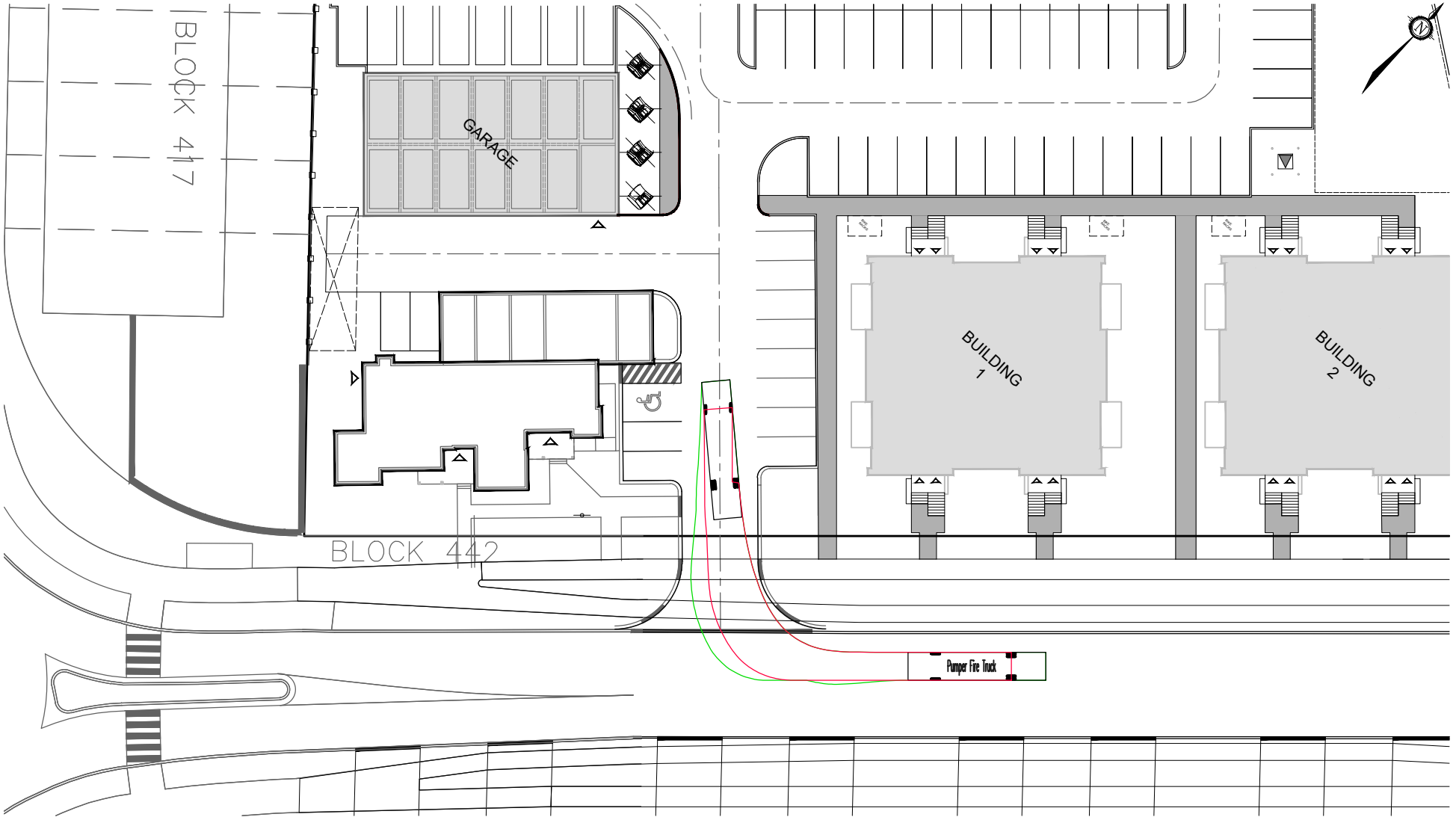
			TDM measures: *Residential developments*	Check if proposed & add descriptions
		1.	**TDM PROGRAM MANAGEMENT**	
		1.1	**Program coordinator**	
BASIC	★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
		1.2	**Travel surveys**	
BETTER		1.2.1	Conduct periodic surveys to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

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

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

APPENDIX H

Turning Movements



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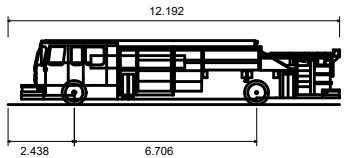

Pumper Fire Truck

Overall Length	12.192m
Overall Width	2.489m
Overall Body Height	2.361m
Min Body Ground Clearance	0.200m
Track Width	2.489m
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

METRIC APARTMENT BLOCK

TURNING MOVEMENT (FIRE TRUCK)

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

DATE MAR 2025 | JOB 110037 | FIGURE FIGURE 1

SHT8X11.DWG - 216mmx279mm

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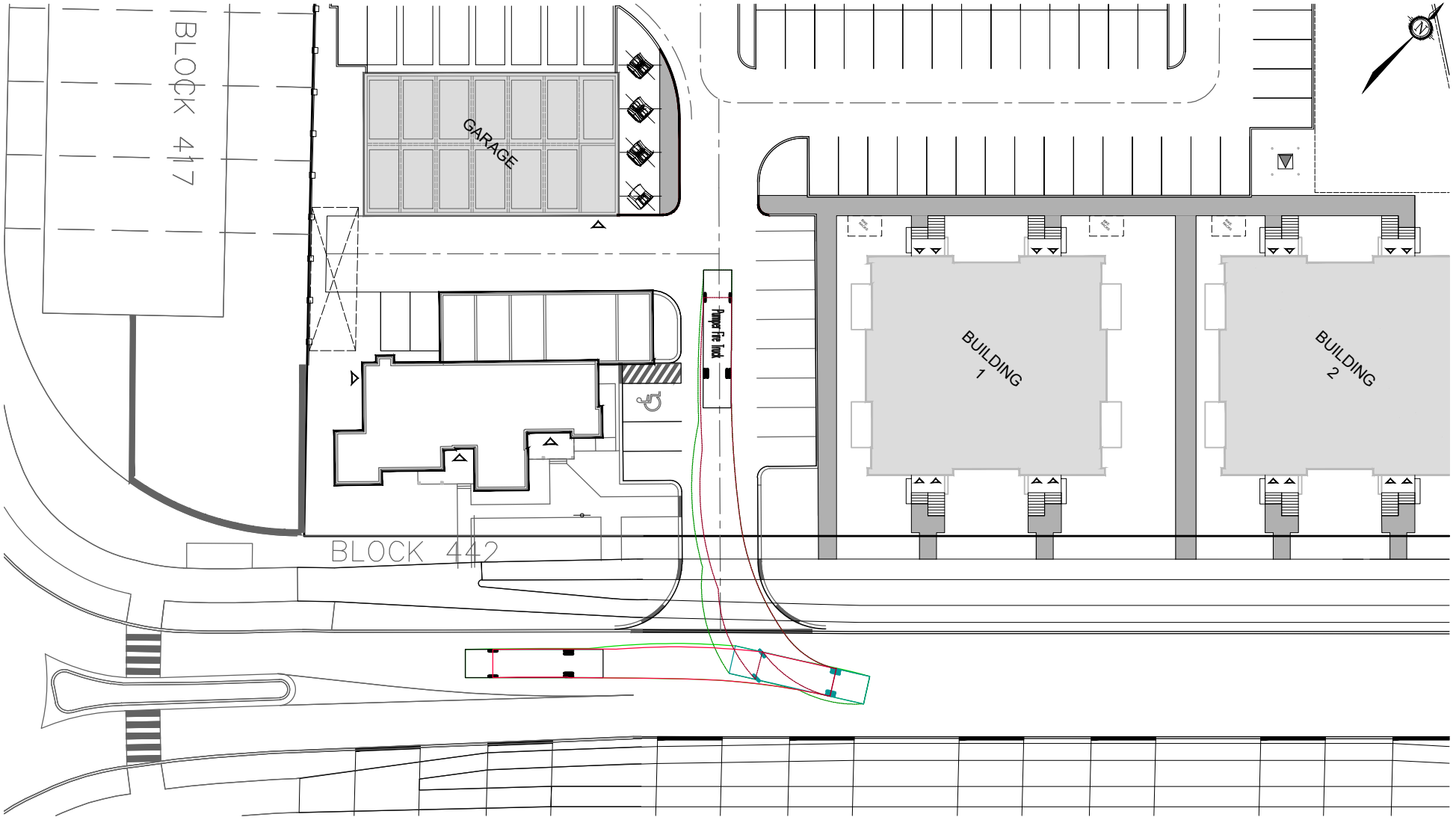

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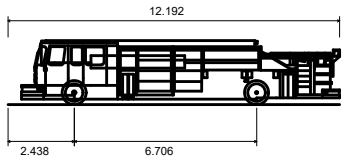

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Overall Length	12.192m
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Track Width	2.489m
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

METRIC APARTMENT BLOCK

TURNING MOVEMENT (FIRE TRUCK)

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

DATE MAR 2025 | JOB 110037 | FIGURE FIGURE 2

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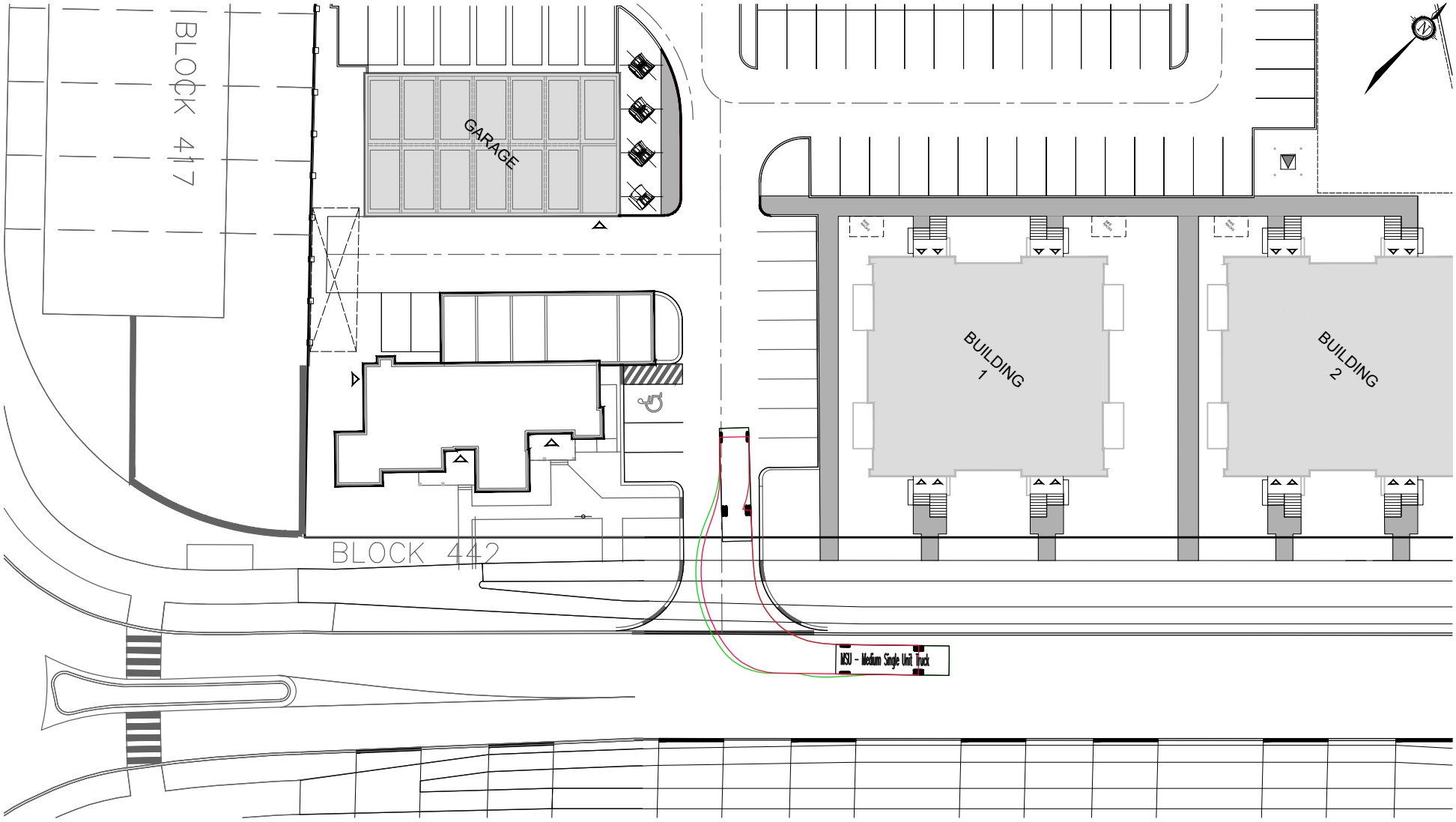

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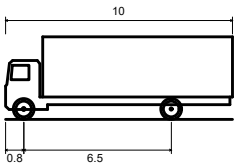

MSU - Medium Single Unit Truck

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

METRIC APARTMENT BLOCK

TURNING MOVEMENT (MSU / GARBAGE TRUCK)

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

DATE MAR 2025 | JOB 110037 | FIGURE FIGURE 3

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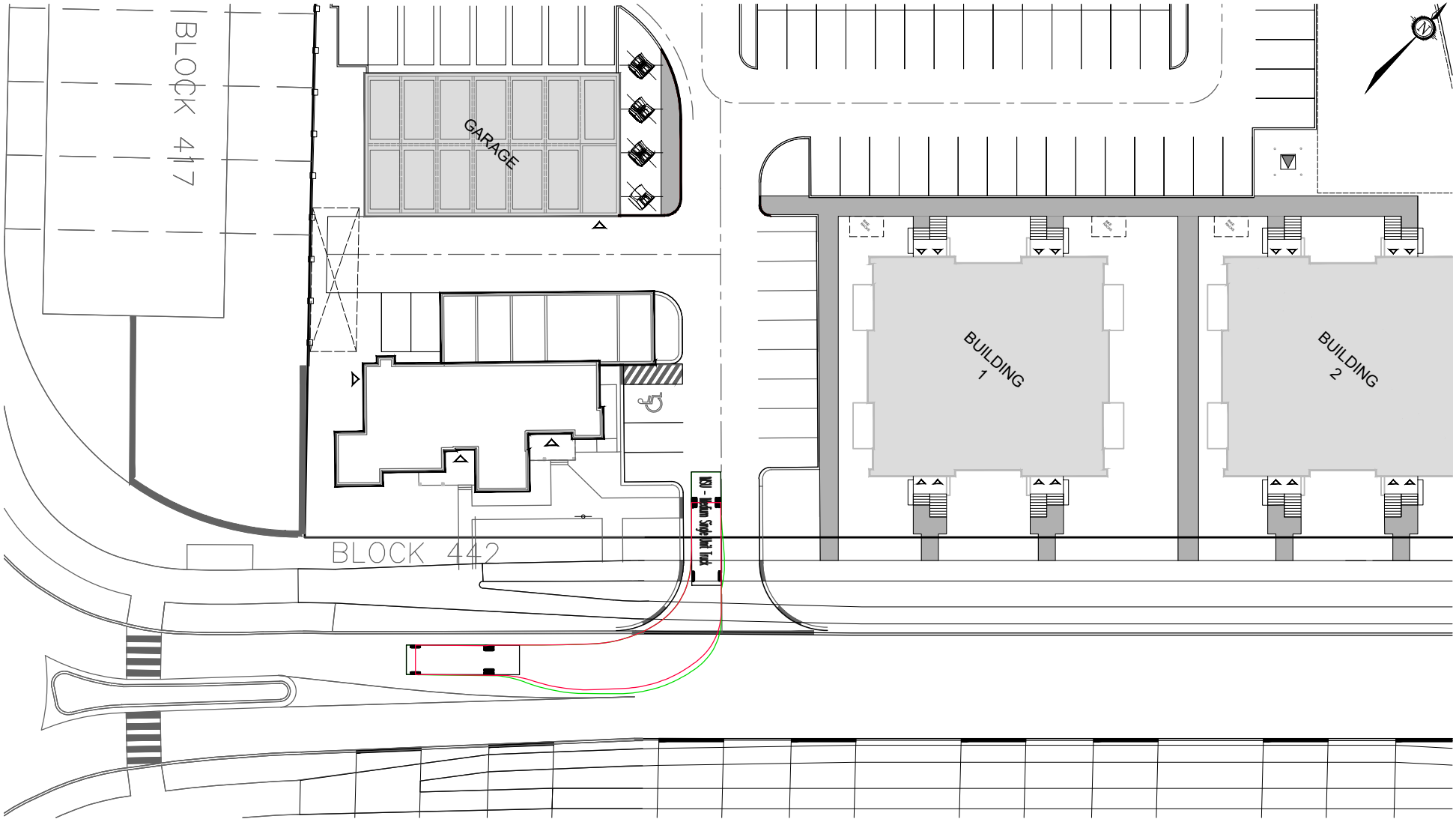

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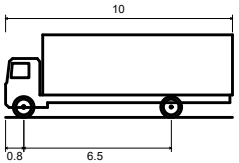

MSU - Medium Single Unit Truck

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

METRIC APARTMENT BLOCK

TURNING MOVEMENT (MSU / GARBAGE TRUCK)

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

DATE MAR 2025 | JOB 110037 | FIGURE FIGURE 4

SHT8X11.DWG - 216mmx279mm

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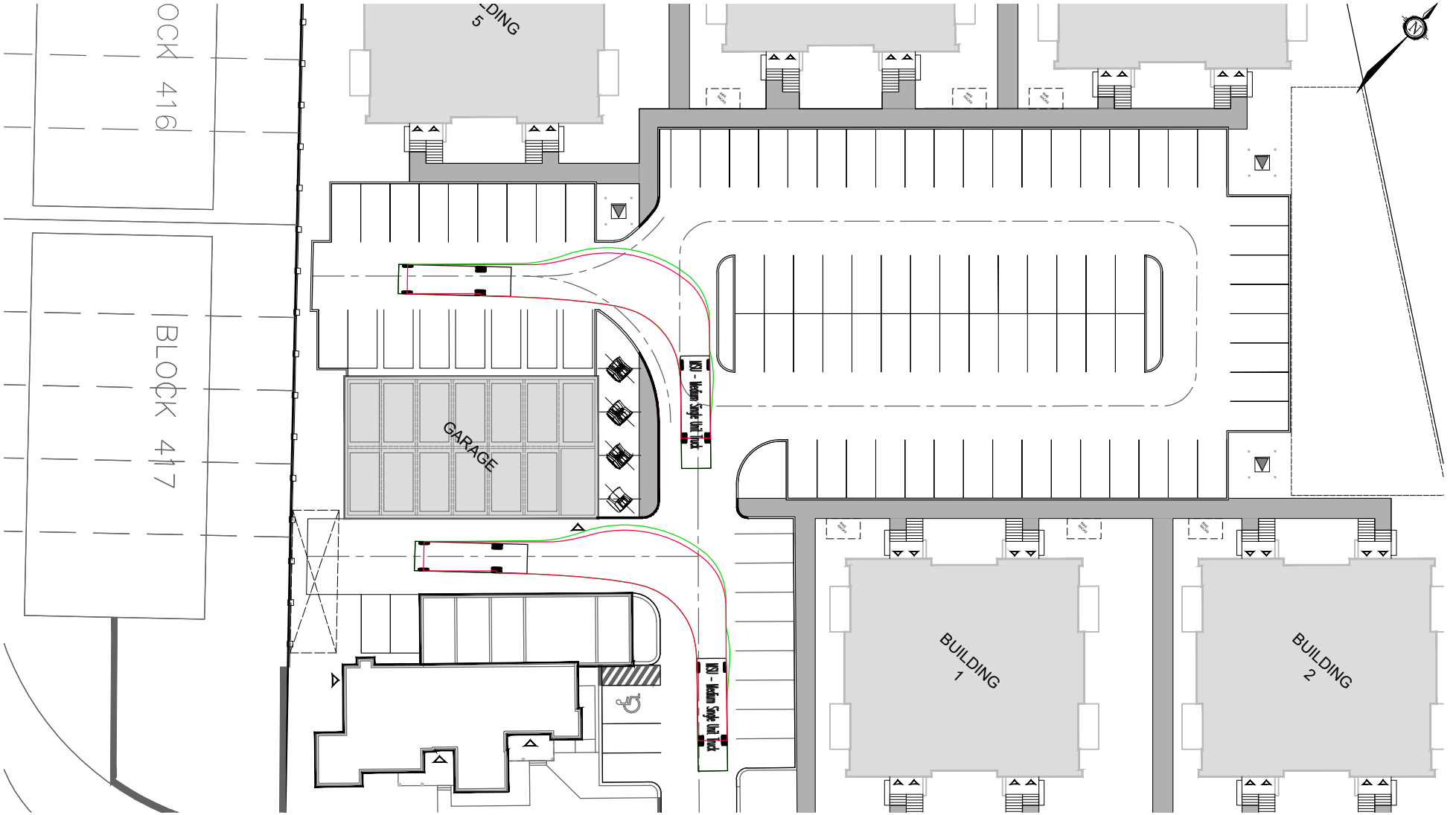

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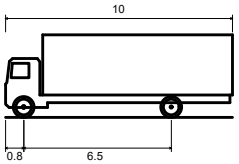

MSU - Medium Single Unit Truck

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

METRIC APARTMENT BLOCK

TURNING MOVEMENT (MSU / GARBAGE TRUCK)

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

DATE MAR 2025 | JOB 110037 | FIGURE FIGURE 5

SHT8X11.DWG - 216mmx279mm

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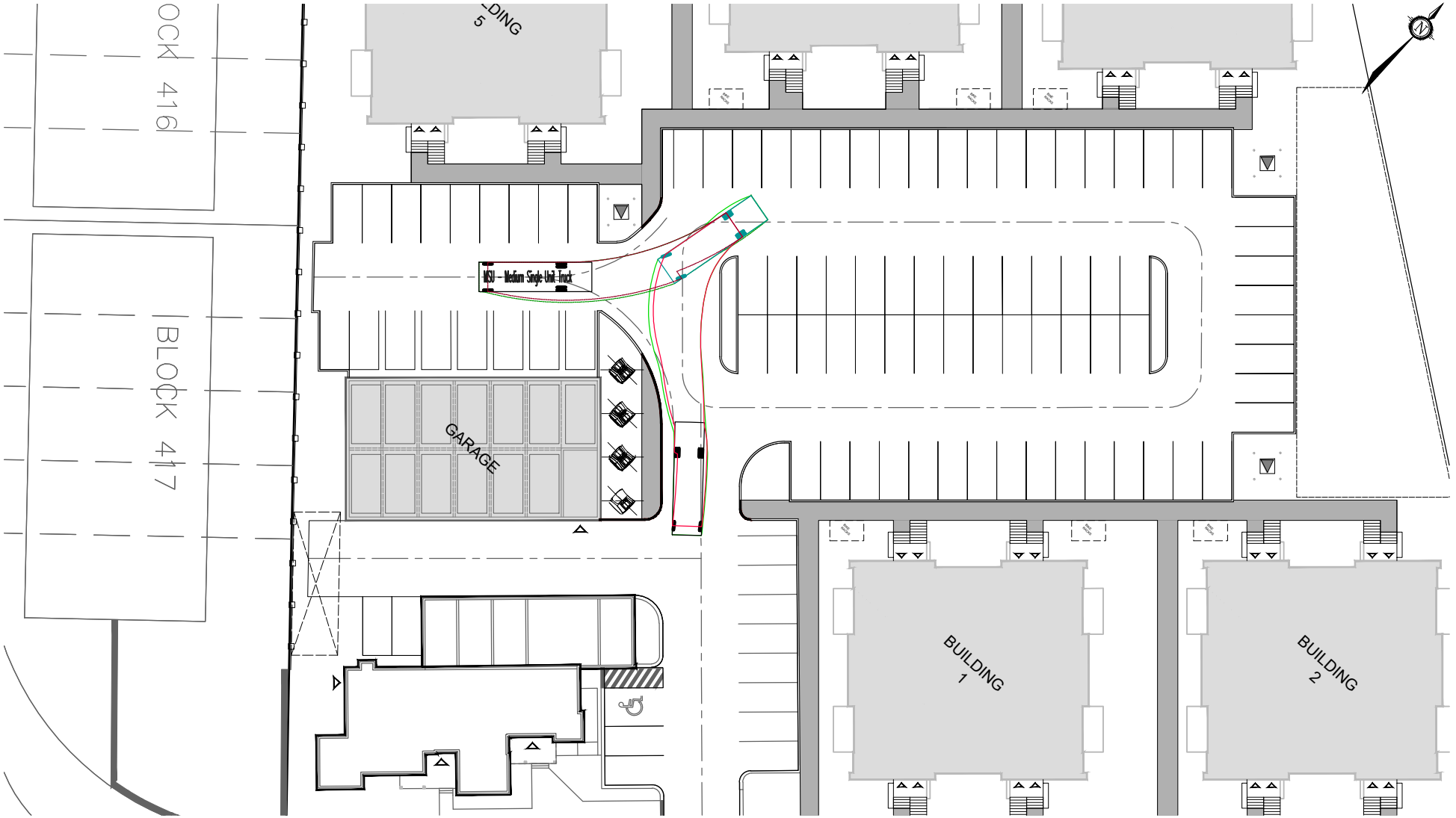

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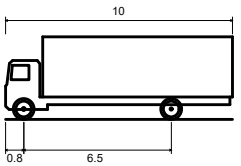

MSU - Medium Single Unit Truck

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

METRIC APARTMENT BLOCK

TURNING MOVEMENT (MSU / GARBAGE TRUCK)

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

DATE MAR 2025 | JOB 110037 | FIGURE FIGURE 6

SHT8X11.DWG - 216mmx279mm

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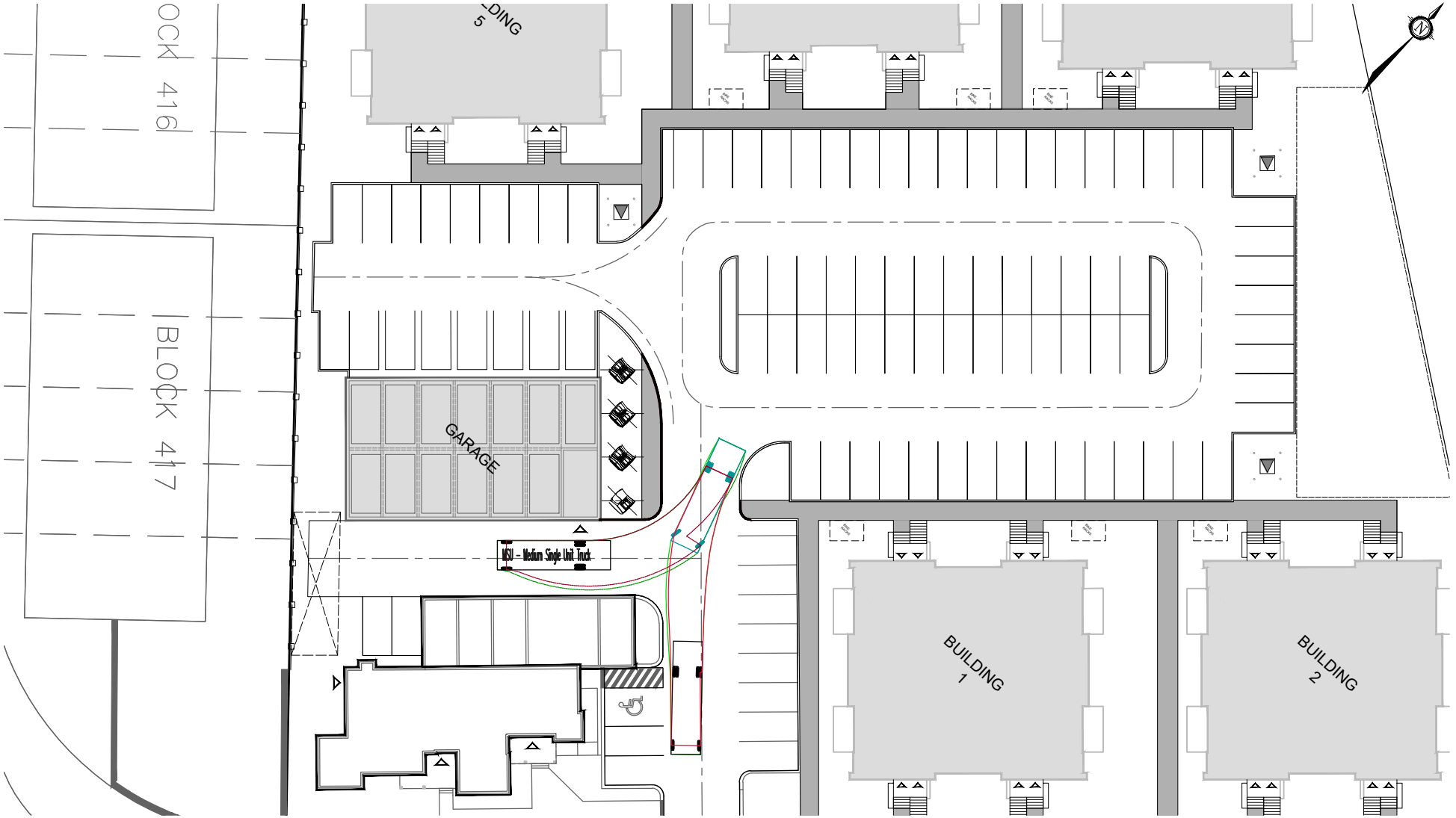

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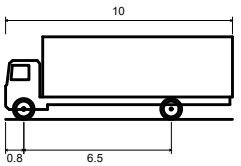

MSU - Medium Single Unit Truck

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

METRIC APARTMENT BLOCK

TURNING MOVEMENT (MSU / GARBAGE TRUCK)

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

DATE MAR 2025 | JOB 110037 | FIGURE FIGURE 7

SHT8X11.DWG - 216mmx279mm

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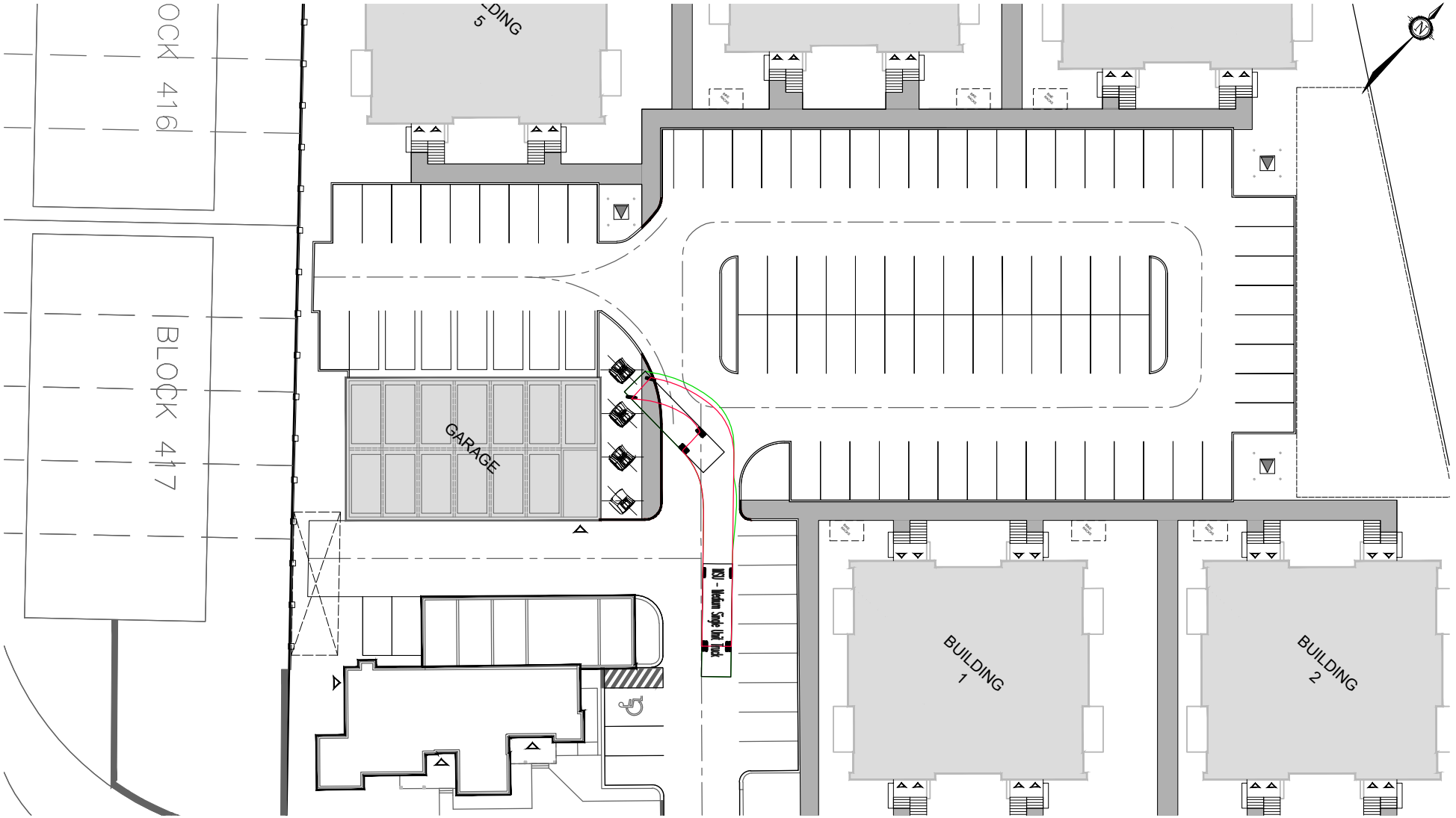

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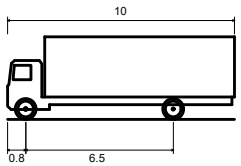

MSU - Medium Single Unit Truck

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

METRIC APARTMENT BLOCK

TURNING MOVEMENT (MSU / GARBAGE TRUCK)

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

DATE MAR 2025 | JOB 110037 | FIGURE FIGURE 8

SHT8X11.DWG - 216mmx279mm

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APPENDIX I

MMLOS Review

Segment MMLOS Analysis

This section provides a review of the boundary frontage, 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 Abbott Street East, based on the targets for the General Urban Area.

Exhibit 4 of the *MMLOS Guidelines* has been used to evaluate the pedestrian level of service (PLOS). Exhibit 22 of the *MMLOS Guidelines* identifies a target PLOS C for all roadways in the General Urban Area. The results of the PLOS analysis are summarized in **Table 1**.

Exhibit 11 of the *MMLOS Guidelines* has been used to evaluate the bicycle level of service (BLOS). Exhibit 22 of the *MMLOS Guidelines* identifies a target BLOS D for roadways in the General Urban Area with no cycling route designation. The results of the BLOS analysis are summarized in **Table 2**.

Exhibit 15 of the *MMLOS Guidelines* has been used to evaluate the transit level of service (TLOS). Within the General Urban Area, Exhibit 22 of the *MMLOS Guidelines* identifies no target TLOS for roadways without a RTTP designation. The TLOS of Abbott Street East has been evaluated, as transit service is provided. The results of the TLOS analysis are summarized in **Table 3**.

Exhibit 20 of the *MMLOS Guidelines* has been used to evaluate the truck level of service (TkLOS). Within the General Urban Area, Exhibit 22 identifies no target TkLOS for collector or local roadways with no truck route designation. The TkLOS of Abbott Street East has been evaluated, as transit service is provided. The results of the 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
Abbott Street East (Cranesbill Road to Metric Circle)					
≥ 2.0m	> 2.0m	> 3,000 vpd	No[2]	50 km/h	B

1. Operating speed taken as the speed limit plus 10 km/h.
2. Street parking restricted from December 1 to March 31

Table 2: BLOS Segment Analysis

Road Class	Route Type	Bikeway Type	Travel Lanes	Operating Speed	BLOS
Abbott Street East (Cranesbill Road to Metric Circle)					
Major Collector	No Class	Cycle Track	2	50 km/h	A

Table 3: TLOS Segment Analysis

Facility Type	Level of Congestion Delay, Friction and Incidents			TLOS
	Congestion	Friction	Incident Potential	
Abbott Street East (Cranesbill Road to Metric Circle)				
Mixed Traffic – Frequent Parking/Driveway Friction	Yes	High	High	F

Table 4: TkLOS Segment Analysis

Curb Lane Width	Number of Travel Lanes Per Direction	TkLOS
Abbott Street East (Cranesbill Road to Metric Circle)		
> 3.7m	1	B