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May 25, 2023 **Reference Number:** 23370

Mr. Adam Sheffer
Yonge & Rosehill Inc
1500 Don Mills Road, Unit 100
Toronto, Ontario, M3B 3K4

Dear Mr. Sheffer,

RE: Transportation Impact Study
Proposed Mixed-Use Development
1365 Yonge Street, City of Toronto

LEA Consulting Ltd. is pleased to present the findings of our Transportation Impact Study (TIS) for the proposed mixed-use development located at 1365 Yonge Street in the City of Toronto. This report concluded that the traffic associated with the proposed development will generate a minimal impact on the surrounding transportation network.

Should you have any comments with our assumptions or have any concerns, please contact the undersigned at dchen@lea.ca.

Yours truly,

LEA CONSULTING LTD.

Debang Chen,
Project Manager, Transportation Group

Encl.

Yonge & Rosehill Inc.

TRANSPORTATION IMPACT STUDY

Proposed Mixed-Use Development
1365 Yonge Street, City of Toronto

May 2023

23370

Disclaimer

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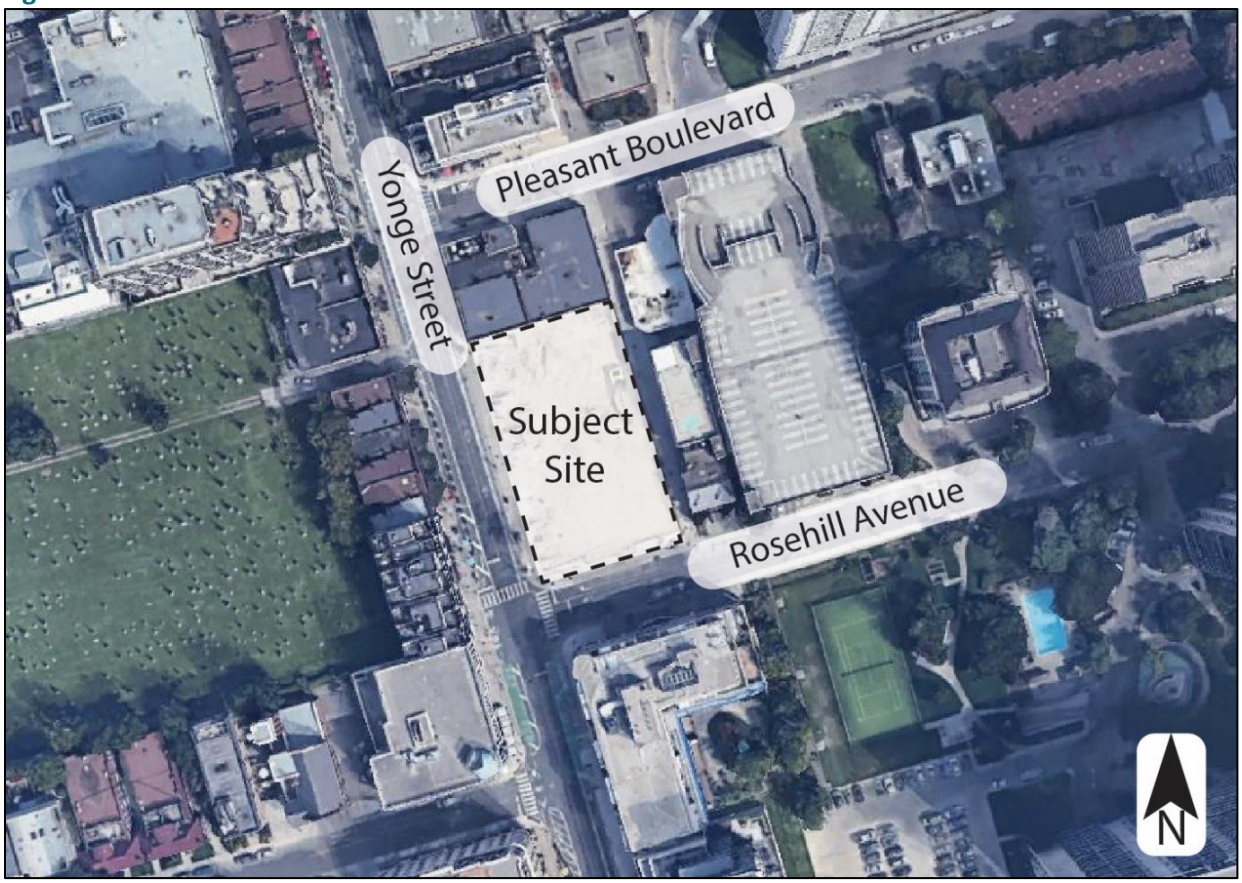
1 INTRODUCTION

LEA Consulting Ltd. (LEA) has been retained by Yonge & Rosehill Inc. to undertake a Transportation Impact Study (TIS) for the proposed mixed-use development located at 1365 Yonge Street (herein referred to as the "subject site") in the City of Toronto. This TIS has been prepared in support of the rezoning (ZBA) and site plan approval (SPA) applications.

The subject site fronts the eastern side of Yonge Street between Pleasant Boulevard (located north) and Rosehill Avenue (located south) as shown in **Figure 1-1**.

Figure 1-1: Site Location



Source: Google Earth, accessed March 2023

The proposed mixed-use development will replace the existing empty lot with a 50-storey building containing 655 residential units and 384.8 m^2 of retail GFA. A total of 204 parking spaces will be provided. Access to underground parking will be provided via a two-unsignalized, all-moves site accesses at the northeast and southeast sides of the subject site:

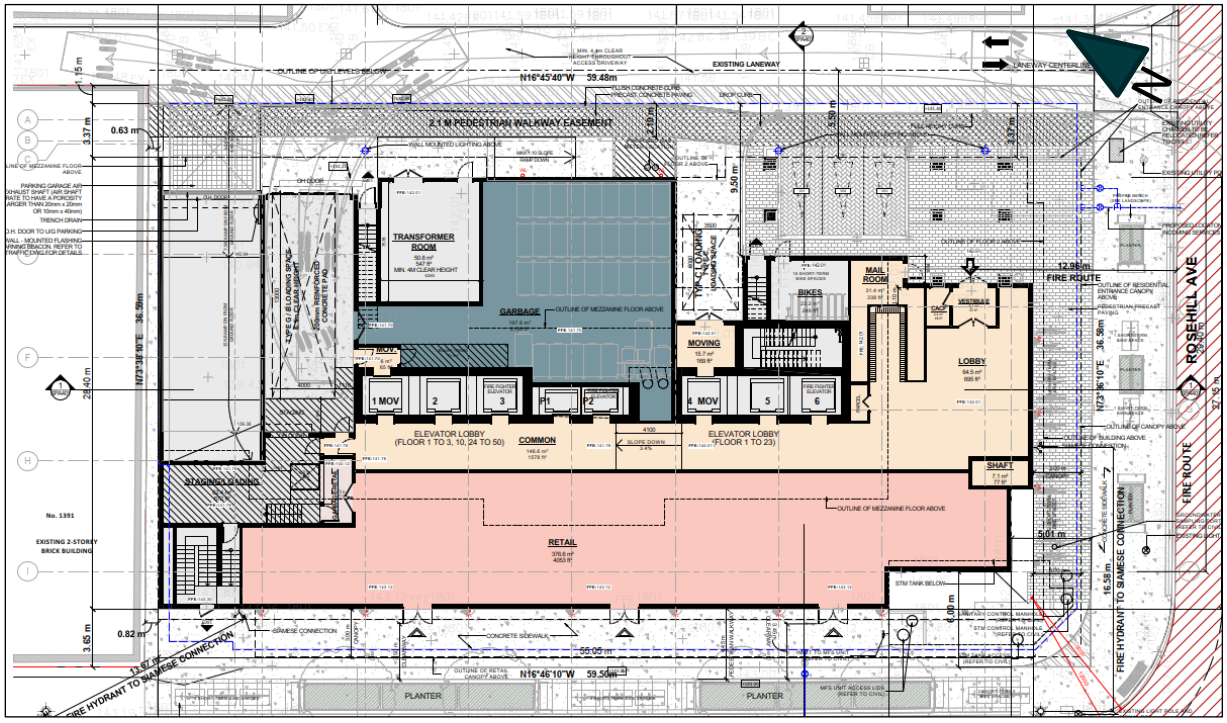
- Rosehill Avenue & Laneway Access.
- Pleasant Boulevard & Laneway Access

Site statistics for the proposed development are detailed in **Table 1-1** while **Figure 1-2** illustrates the proposed ground floor plan.

Table 1-1: Proposed Residential Development

Use	Unit Count/GFA	Unit Mix
1-Bedroom	293 Units	45%
2-Bedroom	296 Units	45%
3+ Bedroom	66 Units	10%
Total Residential	**655 Units**	**100%**
Retail	384.8 m^2	-

Figure 1-2: Proposed Ground Floor Plan



Source: Turner Fleischer Architects, May 2023

2 EXISTING TRAFFIC CONDITIONS

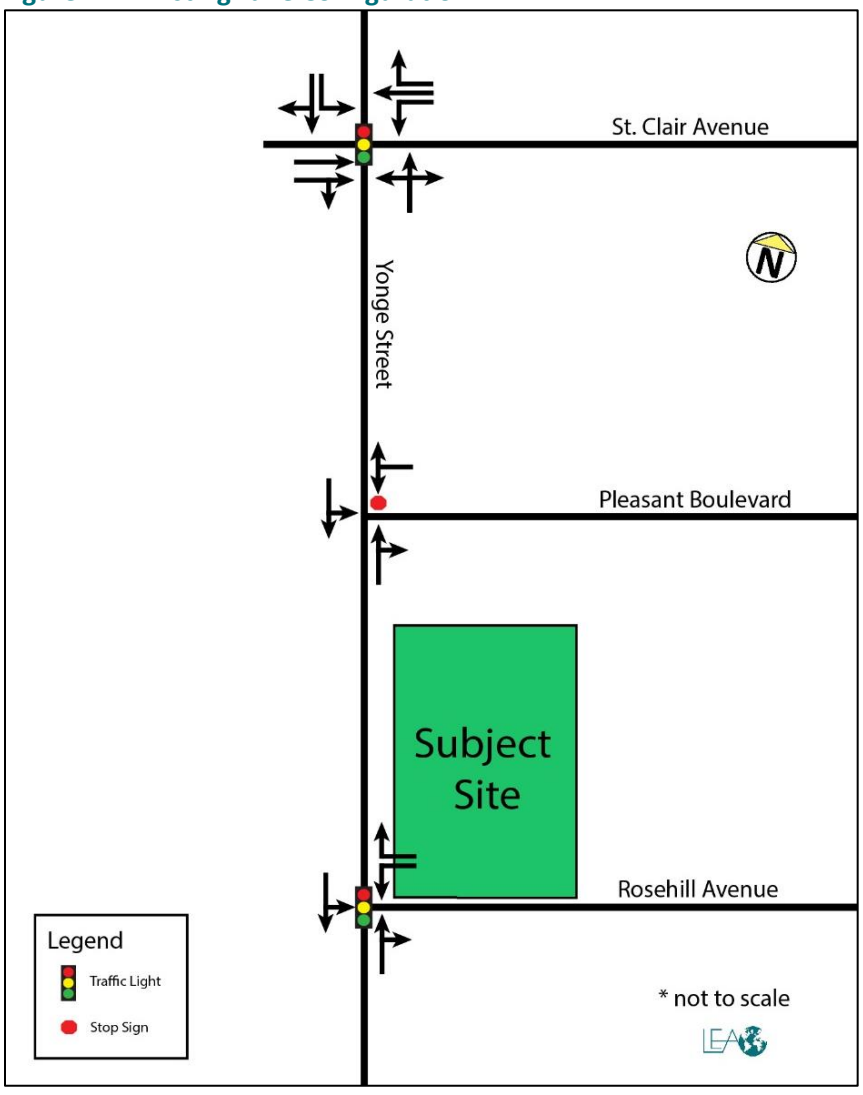
This section identifies and assesses the existing transportation conditions within the study area, including the road, transit, cycling, and pedestrian networks. The study area was determined by assessing the size of the proposed development and its anticipated transportation impact, and through consultation with City staff. The study includes the following intersections:

- Yonge Street and St. Clair Avenue (Signalized);
- Yonge Street and Pleasant Boulevard (Unsignalized); and
- Yonge Street and Rosehill Avenue (Signalized).

2.1 ROAD NETWORK

The following section provides a description and classification of the roadways within the study area. All roadways within the study area are under the jurisdiction of the City of Toronto. **Figure 2-1** illustrating the existing lane configuration.

Figure 2-1: Existing Lane Configuration



Yonge Street is a north-south major arterial road that operates with a four-lane cross-section (two lanes per direction) within the study area. Within the Jurisdiction of the City of Toronto, Yonge Street operates between Queens Quay in the south and Steeles Avenue in the north. As there is no posted speed limit within the study area, the roadway operates with an assumed speed limit of 40 km/h.

Pleasant Boulevard is an east-west local road that operates with a two-lane cross section (two lanes per direction) within the study area. Pleasant Boulevard operates between Yonge Street in the west and Avoca Avenue in the east. The roadway operates with a posted speed limit of 30 km/h within the study area.

Rosehill Avenue is an east-west collector road that operates with a two-lane cross section (one lane per direction) within the study area. Rosehill Avenue operates between Yonge Street in the west and Avoca Avenue in the east. The roadway operates with a posted speed limit of 40 km/h within the study area.

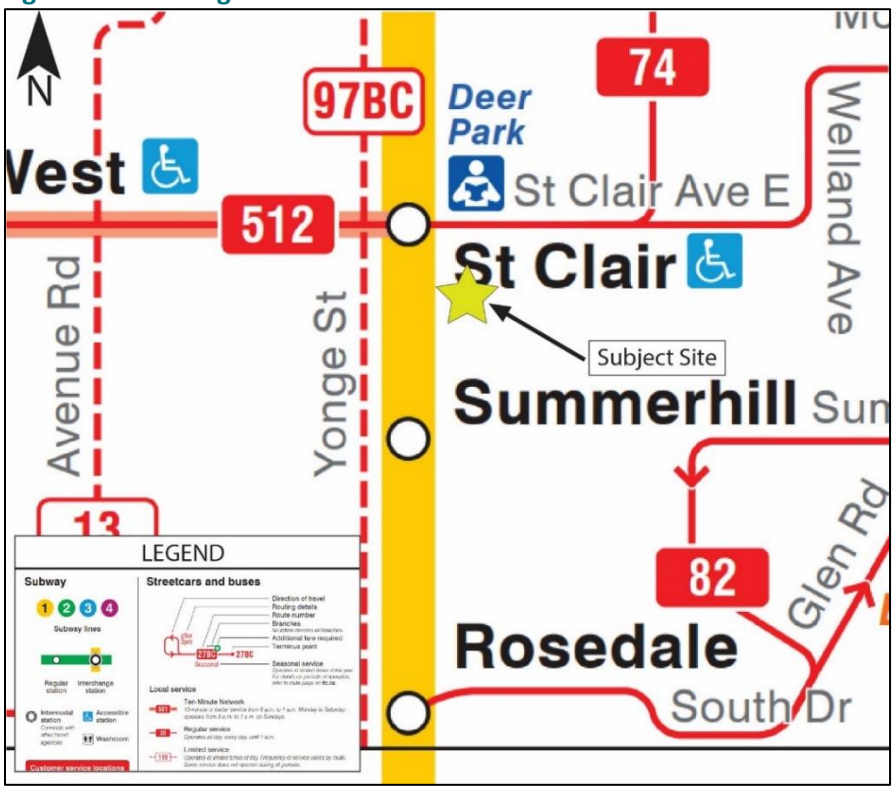
St. Clair Avenue is an east-west major arterial road that operates with a four (4) lane cross section (two lane per direction) and has a posted speed limit of 50 km/h. The roadway extends from Harper Avenue and Scarlett Road within the City of Toronto.

2.2 TRANSIT NETWORK

The subject site is located in an area well-serviced by the Toronto Transit Commission (TTC) transit network. The subject site is within convenient walking distance of subway, streetcar, and bus service at St. Clair Subway Station, and also within walking distance of bus stops at the Yonge Street and St. Clair Avenue East intersection. Transit routes servicing the area are illustrated in **Figure 2-2**.

When entered into the TransitScore™ which measures a locations accessibility using public transit, the site received a score of 84/100 which indicates excellent transit access to both nearby and regional destinations.

Figure 2-2: Existing Transit Network



Source: TTC, March 2023

TTC Line 1 Yonge-University is a subway route that operates in a general north south direction between Vaughan Metropolitan Station and Finch Station. Line 1 Yonge-University operates regular service all day, every day. Subway trains run every two to three minutes during peak periods.

Access Location: The nearest subway entrance is located at St. Clair Station, a 150m (2-minute) walk from the subject site.

TTC Streetcar Route 512 – St. Clair is a streetcar route that generally operates in an east-west direction between the St Clair Station on Line 1 and the area of St Clair Avenue West and Keele Street. The route is part of the 10-Minute Network, and operates 10-minutes or better all day, every day.

Access Location: The nearest eastbound/westbound bus stops are located at the intersection of Yonge Street & St. Clair Avenue East, a 180m (3-minute) walk from the subject site.

TTC Bus Route 312 – St. Clair Junction Night Bus is a bus route that generally operates in an east-west direction between St. Clair Station on Line 1 Yonge-University and Dundas West Station on Line 2 Bloor Danforth via St. Clair Avenue, Jane Street, and Dundas Street. The route operates regular all night, every night service and is part of the TTC Blue Night Network with 30 minutes or better headways.

Access Location: The nearest eastbound/westbound bus stops are located at the intersection of Yonge Street & St. Clair Avenue East, a 180m (3-minute) walk from the subject site.

TTC Bus Route 320 – Yonge Night Bus is a bus route that generally operates in a north-south direction between the area of Queens Quay West and Bay Street, and the area of Steeles Avenue East and Yonge Street. The route operates regular all night, every night service and is part of the TTC Blue Night Network with 30 minutes or better headways.

Access Location: The nearest northbound/southbound bus stops are located at the intersection of Yonge Street & Rosehill Avenue, a 58m (1-minute) walk from the subject site.

TTC Bus Route 97B/C – Yonge is a bus route that operates in a general north-south direction between Davisville Station and York Mills Station on TTC Line 1 Yonge-University, and the area of Yonge Street and Steeles Avenue West. The route operates regular all day, everyday service until 1 a.m.

Access Location: The nearest northbound/southbound bus stops are located at the intersection of Yonge Street & Rosehill Avenue, a 58m (1-minute) walk from the subject site.

TTC Bus Route 88 – South Leaside is a bus route that generally operates in an east-west direction between St Clair Station on Line 1, the Wicksteed Avenue area, and the Thorncliffe Park Drive area. The route operates regular all day, everyday service until 1 a.m.

Access Location: The nearest eastbound/westbound bus stops are located at St. Clair Station, a 150m (2-minute) walk from the subject site.

TTC Bus Route 74/A – Mount Pleasant is a bus route that operates in a general north-south direction between St. Clair Station on TTC Line 1 Yonge-University and the area of Mount Pleasant Road and Doncliffe Drive. The route operates regular all day, everyday service until 1 a.m.

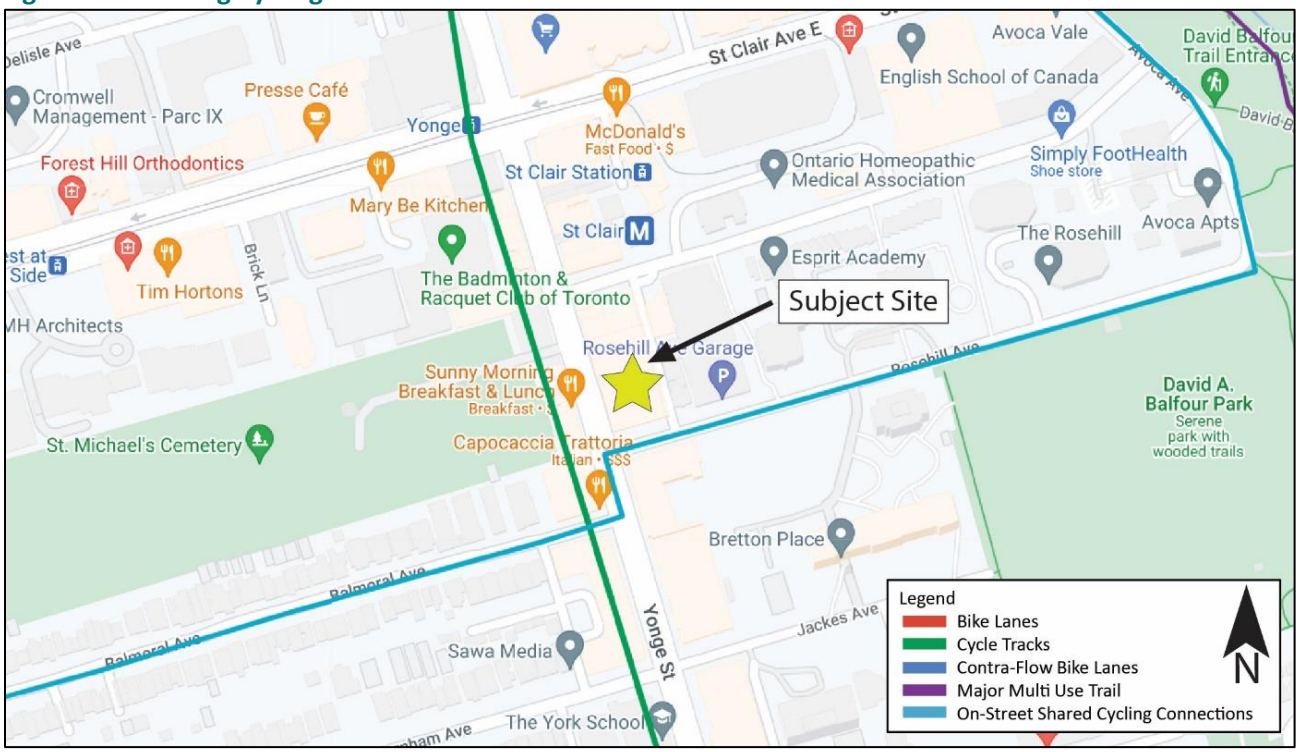
Access Location: The nearest northbound/southbound bus stops are located at St. Clair Station, a 150m (2-minute) walk from the subject site.

2.3 ACTIVE TRANSPORTATION

2.3.1 Cycling Network

The existing cycling network surrounding the site is illustrated in **Figure 2-3**. The subject site is located in a neighbourhood with good access to nearby cycling infrastructure. There are cycle tracks located along Yonge Street which provides north-south access to on-street shared cycling connections along Balmoral Avenue and Rosehill Avenue. When entered into the BikeScore™ which measures a how accessible is a location using the existing cycling network, the site received a score of 77/100 which indicates biking is convenient for most trips.

Figure 2-3: Existing Cycling Network

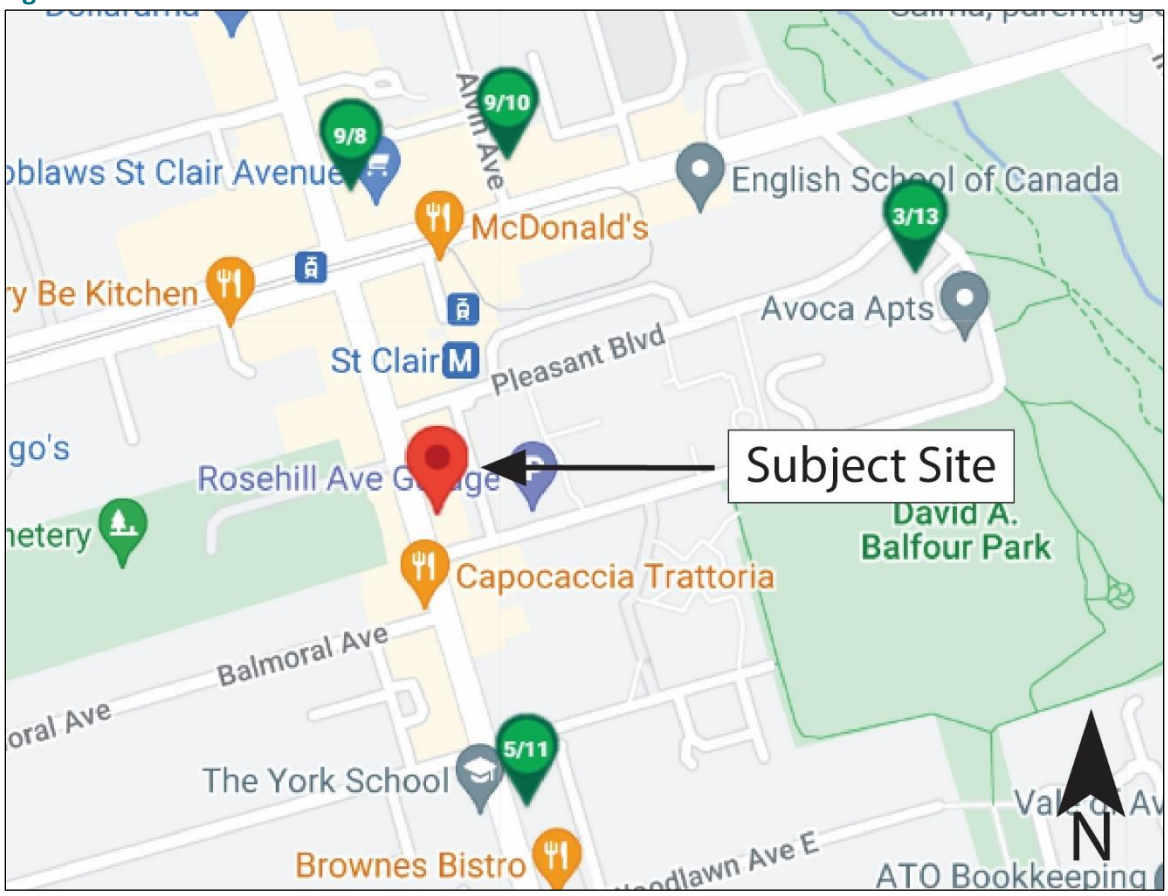


Source: City of Toronto, March 2023

2.3.1.1 BikeShare Toronto

BikeShare Toronto is a bike sharing system operated within the City by the Toronto Parking Authority (TPA). The system currently consists of 630 stations and 7185 bikes of which four (4) stations are located within proximity to the subject site. The existing four (4) currently have the capacity to accommodate up to 42 bikes. The existing BikeShare network within proximity to the subject site is illustrated in **Figure 2-4**.

Figure 2-4: BikeShare Toronto Network



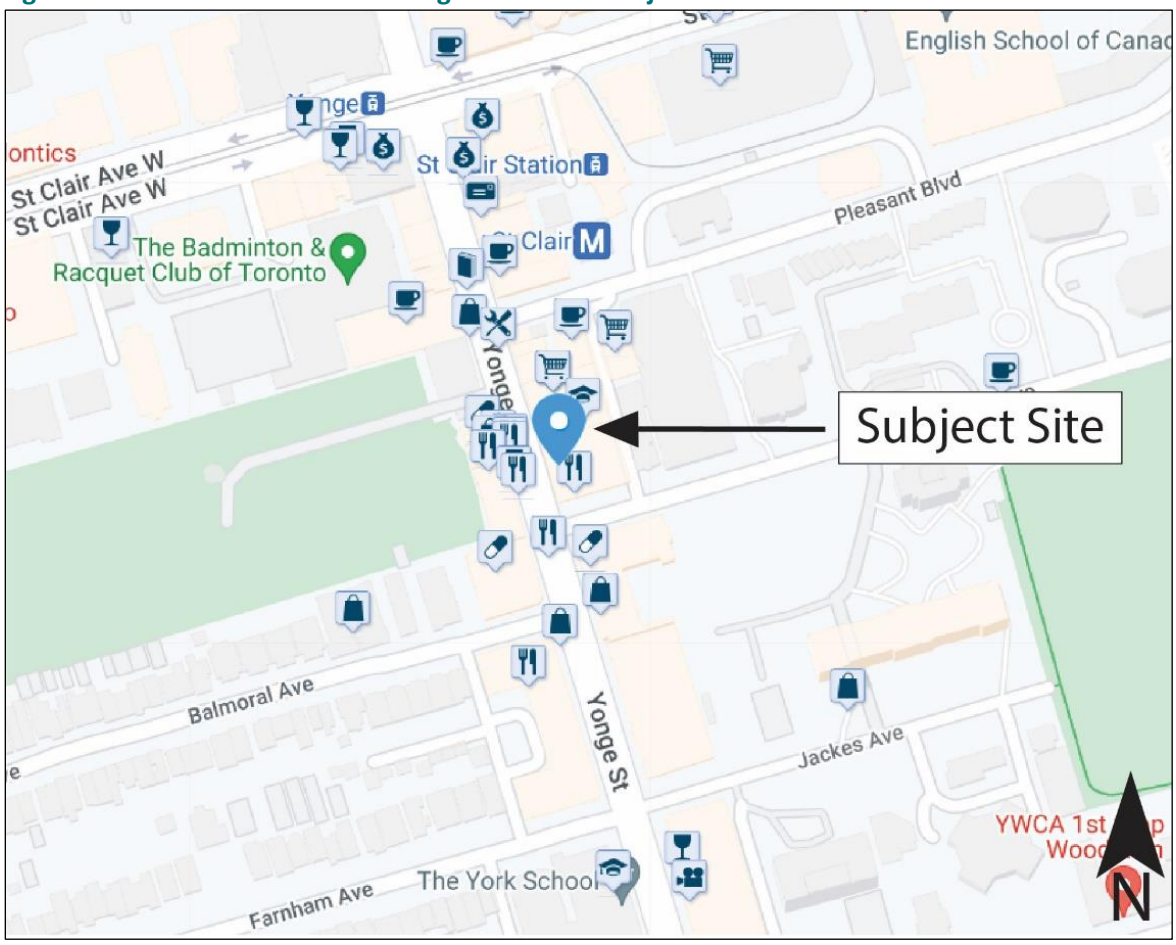
Source: BikeShare Toronto, 2023

2.3.2 Pedestrian Network

In the area immediately surrounding the subject site, the existing pedestrian network consists of sidewalks along both sides of Yonge Street, Rosehill Avenue and Pleasant Boulevard. Pedestrian crosswalks are available on most approaches with protected pedestrian phases at the signalized intersection in the study area. At the signalized intersection of Yonge Street & Rosehill Avenue, there is no east-west crosswalk along the south end of the intersection across Yonge Street. In order for pedestrians to cross that intersection in an east-west direction, they must cross at the designated crosswalk along the north side of the intersection. The existing pedestrian network provides good connections between the residential and commercial uses in the area as well as to nearby TTC transit stops.

When entered in the WalkScore™ the site received a score of 93/100 which indicates that all errands to/from the site do not require a private vehicle.

Figure 2-5: Amenities within Walking Distance to Subject Site



2.4 TRAFFIC DATA COLLECTION

Turning movement counts (TMCs) were used as the source of traffic data for the intersection capacity analysis. All traffic counts were obtained by LEA on March 21, 2023 which includes peak hour factors (PHF), conflicting cyclist volumes, and heavy vehicle percentages.

A summary of the TMC data collected is provided in **Table 2-1**, with detailed traffic counts and signal timing plans obtained from the City of Toronto available in **Appendix A**.

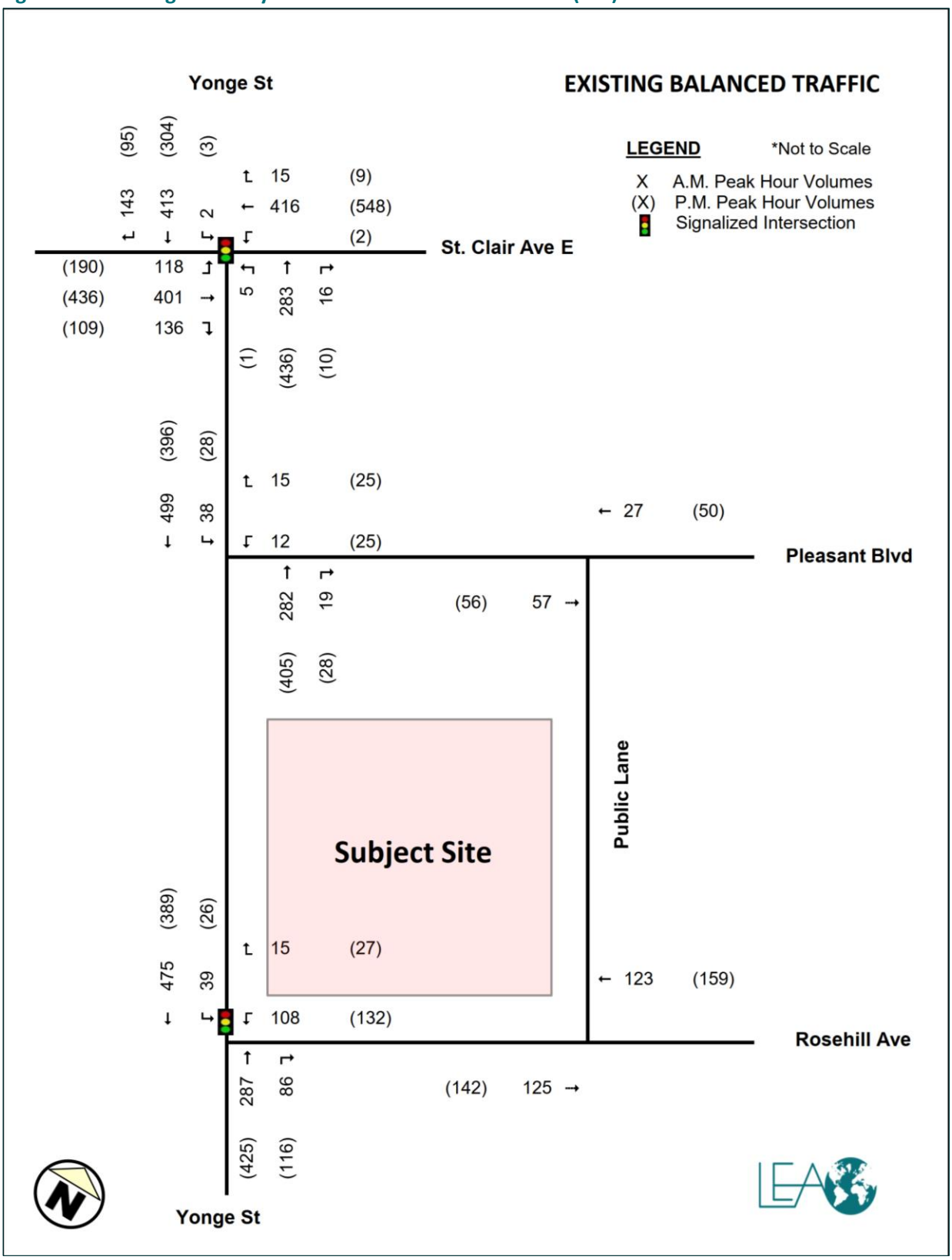
Table 2-1: Data Collection Summary

Intersection	TMC Date	Source
Yonge St & St. Clair Ave	Tuesday, March 21, 2023	LEA
Yonge St & Pleasant Ave		
Yonge St & Rosehill Ave		

2.5 INTERSECTION CAPACITY ANALYSIS

The existing balanced traffic volumes in the study area during the weekday AM and PM peak hours are illustrated in **Figure 2-6**. As the subject site is currently vacant no access points were analyzed.

Figure 2-6: Existing Weekday Peak Hour Traffic Volumes: AM (PM)



3 FUTURE BACKGROUND CONDITIONS

The analysis of future backgrounds conditions considered a five (5) year horizon from existing year 2023 to future year 2028. Future background conditions include traffic added to the existing road network from other nearby developments as well as any planned transportation infrastructure improvements within the study area.

Changes to Models

Input parameters from existing scenarios were maintained with corresponding future background traffic volumes.

3.1 BACKGROUND DEVELOPMENTS

Eleven background developments were identified within the immediate study area. Background development traffic volumes were extracted from their respective traffic studies and were subsequently assigned to the study area road network. Site statistics for each development are summarized in **Table 3-1**, and excerpts from the studies are provided in **Appendix B**.

Table 3-1: Background Developments

#	Location	Proposed Development	Source of Traffic Volumes
1	1 St. Clair Ave E	345 residential units; 1,770 m^2 commercial space; 8,040 m^2 office space	TIS dated March, 2017 (Figure 5-1) Nextrans
2	1 – 13 St. Claire Ave W	340 residential units; 882 m^2 commercial space; 7,040 m^2 office space	TIS dated December 2021 (Table 10) BA Group
3	45 St Clair Ave W	629 residential units; 568 m^2 commercial space; 6,106 m^2 ofice space	TIS dated September 2022 (Table 16) BA Group
4	11 Pleasant Blvd	72 residential units; 65 m^2 commercial space	TIS dated February 2021 (Figure 14) BA Group
5	29 Pleasant Blvd	302 residential units	TIS dated December 2019 (Figure 10) BA Group
6	49 Jackes Ave	217 residential units	TIS dated November 2020 (Figure 9) BA Group
7	1233 Yonge St & 9 Woodlawn Ave E	69 residential units; 433 m^2 commercial space	TIS dated December 2021 (Table 5) BA Group
8	1417-1429 Yonge St	198 residential units; 1,255 m^2 commercial space;	TIS Update dated January 2020 LEA Consulting Ltd.
9	1485 Yonge St	1,357 residential units; 27,700 m^2 commercial space	TIS dated April 2019 (Figure 59) BA Group
10	1496-1510 Yonge St & 1-11 Delisle Ave	293 residential units; 614 m^2 commercial space	TIS Update dated October 2019 BA Group

#	Location	Proposed Development	Source of Traffic Volumes
11	1406-1438 Yonge St	542 residential units; 81 m^2 commercial space	TIS Update dated November 2022 LEA Consulting Ltd.

3.2 CORRIDOR GROWTH

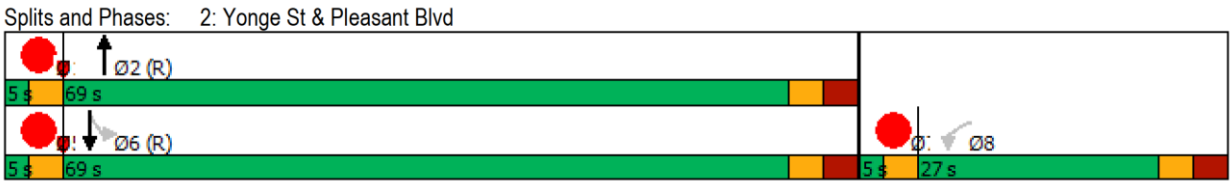
No growth rates were applied to maintain consistency with the *1 St. Clair Avenue East* TIS which did not include general growth along Yonge Street.

3.3 CHANGES IN ROAD NETWORK

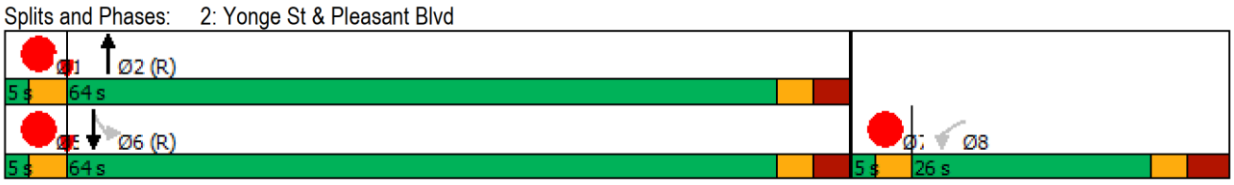
The intersection at Yonge Street & Pleasant Avenue is planned to become a signalized intersection as part of the TIS performed at 1406-1438 Yonge Street. The following AM/PM STPs from the *1406-1438 Yonge Street* TIS are summarized in **Table 3-2**.

Table 3-2: Proposed Signalized Yonge Street & Pleasant Avenue Intersection - Signal Timing Plans

AM Signal Timing Plan



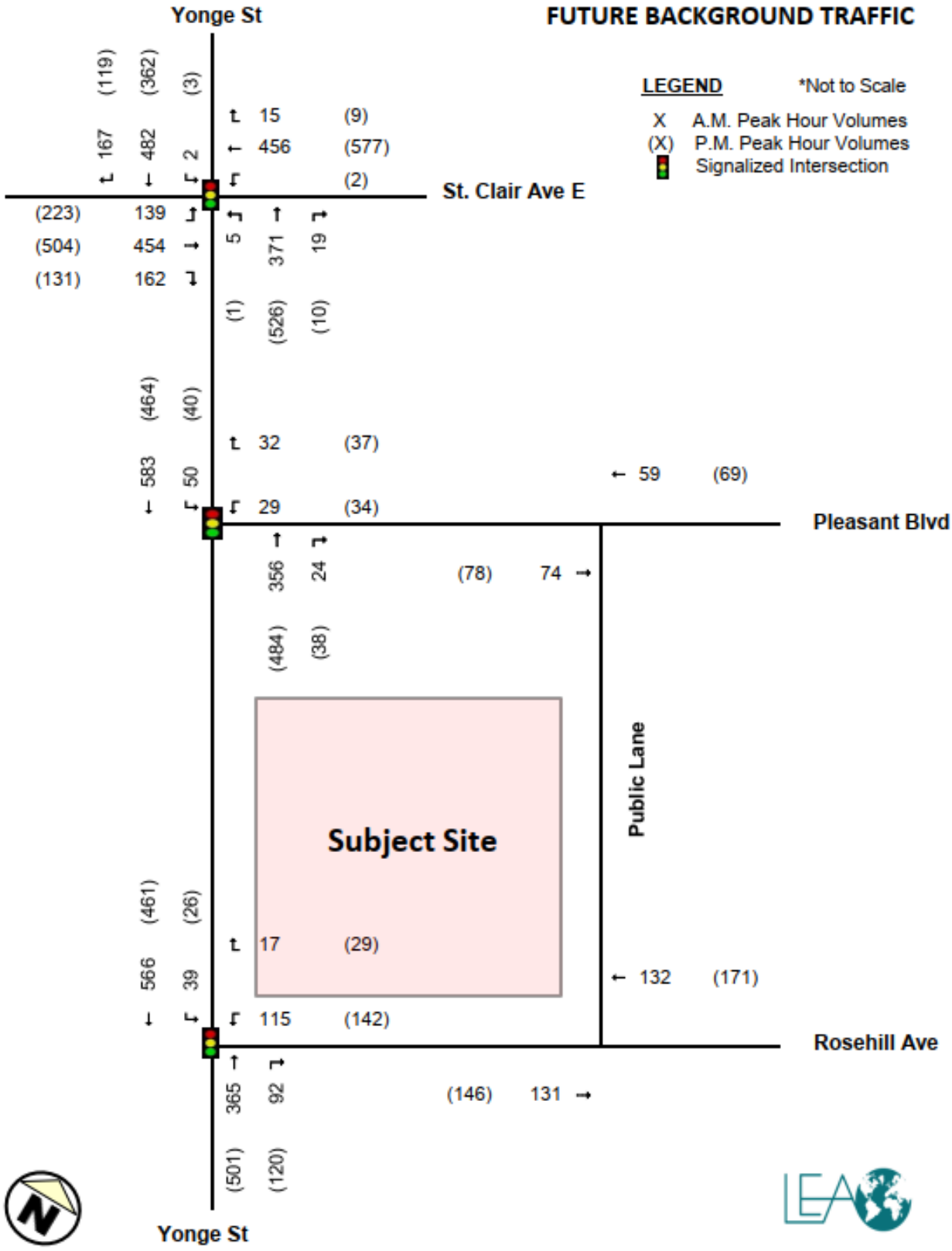
PM Signal Timing Plan



3.4 FUTURE BACKGROUND TRAFFIC

Future background traffic conditions were determined by incorporating background development traffic along with the existing traffic volumes. The future background traffic volumes for the weekday AM and PM peak hours are illustrated in **Figure 3-1**.

Figure 3-1: Future Background Weekday Peak Hour Traffic Volumes: AM (PM)



4 SITE GENERATED TRAFFIC

The proposed development consists of one (1) high-rise building containing 655 residential units and 4,141 ft^2 (384.8 m^2) of at-grade commercial GFA. For the purpose of trip generation, the commercial GFA was rounded up to 5000 ft^2. Supporting calculations are provided in **Appendix C.**

Trip generation associated with the proposed development was determined using relevant Land Use Codes (LUC) and the standard methodology provided by the ITE Trip Generation Manual 11th Edition.

The following LUC was used for the residential and retail site uses:

- **LUC 222**: Multifamily Housing (High Rise) person trip rates; for retail use
- **LUC 822**: Strip Retail Plaza (<40k) average vehicle trip rates.

For retail use, conversion to person trips assumed a vehicle mode share of 95% and an average vehicle occupancy for retail use per ITE Trip Generation Handbook, 3rd Edition.

The sections below discuss the calculation, distribution, and assignment of site-generated vehicle trips.

4.1 MODAL SPLIT

The modal split for the subject site was determined using data from the 2016 Transportation Tomorrow Survey (TTS) and filtered for traffic analysis zones 202 to 204. These zones cover the general Yonge Street and St. Clair Avenue neighbourhoods that have more mid-rise and high-rise multi-use and residential buildings. For residential and work trips, trip purpose included home-based work and home-based school. For retail trips, trip purposes included home-based discretionary.

The modal split for each use is summarized in **Table 4-1**. Detailed TTS calculations are provided in **Appendix C.**

Table 4-1: TTS Modal Split Summary

Land Use	Description	Modal Split
Residential	**External Person Trips**	**100%**
	Auto Driver Trips	19%
	Passenger Trip	5%
	Transit Trips	52%
	Pedestrian trips	6%
	Cycling Trips	18%
Retail	**External Person Trips**	**100%**
	Auto Driver Trips	39%
	Passenger Trip	14%
	Transit Trips	32%
	Pedestrian trips	13%
	Cycling Trips	2%

4.2 TRIP GENERATION

The proposed development will generate two trip types: residential and retail. As previously noted, trip generation for the residential component was estimated using baseline trip rates from the *ITE Trip Generation Manual 11th Edition.* ITE Lane Use Code 222 and 822 were used for the residential and retail component respectively.

As summarized in **Table 4-2,** the proposed development is expected to generate at total of 46 and 70 two-way trips during the AM/PM peak hours respectively. Full trip generation details are provided in **Appendix C**.

Table 4-2: Trip Generation

Land Use	Description	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Residential ITE LUC 222 – Multifamily Housing (High-Rise) 655 Units	ITE Person Trip Rate (/Unit)	0.09	0.26	0.34	0.30	0.16	0.46
	Person Trips	56	167	223	199	102	301
	Site Interaction	-1	-2	-3	-5	-2	-7
	Total External Trips	55	165	220	194	100	294
	Non-Auto Mode Split Reduction	-45	-134	-179	-157	-81	-238
	Proposed Residential - External Auto Trips	**10**	**31**	**41**	**37**	**19**	**56**
Retail *ITE LUC 822 - Strip Retail Plaza (<40k)* 5,000 ft²	Auto Trip Rate (/1000 ft2)	1.42	0.94	2.36	3.30	3.30	6.59
	Total Auto Trips	7	5	12	17	16	33
	Adjusted Person Trips	9	6	15	22	20	42
	Site Interaction	-2	-1	-3	-2	-5	-7
	Total External Trips	7	5	12	20	15	35
	Non-Auto Mode Split Reduction	-4	-3	-7	-12	-9	-21
	Primary External Auto Trips	**3**	**2**	**5**	**8**	**6**	**14**
Total New Site Auto Trips		**13**	**33**	**46**	**45**	**25**	**70**

4.2.1 Multi-Modal Trip Generation

Multi-modal trip generation for the site is summarized in **Table 4-3**. The site is expected to generate 119 and 165 two-way transit trips during peak hours followed by 46 and 70 auto driver trips, and 40 and 53 cycling trips during the same hours. The remaining trips will comprise of two-way pedestrian and passenger trips.

Table 4-3: Subject Site Multi-Modal Trip Generation

Land Use	Description	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Residential	External Person Trips	55	165	220	194	101	295
	Auto Driver Trips	10	31	41	37	19	56
	Passenger Trip	3	8	11	10	5	15
	Transit Trips	29	86	115	101	53	154
	Pedestrian trips	3	10	13	12	6	18
	Cycling Trips	10	30	40	35	18	53
Retail	External Person Trips	7	5	12	20	15	35
	Auto Driver Trips	3	2	5	8	6	14
	Passenger Trip	1	1	2	3	2	5
	Transit Trips	2	2	4	6	5	11
	Pedestrian trips	1	1	2	3	2	5
	Cycling Trips	0	0	0	0	0	0

Land Use	Description	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Total	External Person Trips	62	170	232	214	116	330
	Auto Driver Trips	13	33	46	45	25	70
	Passenger Trip	4	9	13	13	7	20
	Transit Trips	31	88	119	107	58	165
	Pedestrian trips	4	11	15	15	8	23
	Cycling Trips	10	30	40	35	18	53

4.3 TRIP DISTRIBUTION AND ASSIGNMENT

Vehicle site trip distribution was estimated using 2016 TTS data within traffic zones 203. TTS data was filtered for trip types that included auto trips originating in/destined to home and office for traffic zone 203 during the AM/PM peak period. Vehicle site trip assignment was based on the local road network, turn restrictions, changes in future road network (i.e. assumed none), logical routing, and type of access.

Table 4-4 below summarizes the trip distribution for the study area. Detailed TTS calculations are provided in **Appendix C.**

Table 4-4: General Trip Distribution

Direction From/To	Expected Route	Weekday AM Peak Hour		Weekday PM Peak Hour	
		In	Out	In	Out
N	Yonge St	33%	33%	23%	60%
S	Yonge St	0%	14%	15%	0%
E	St. Clair Ave E	15%	0%	18%	3%
	Rosehill Ave	42%	51%	34%	28%
W	St. Clair Ave W	10%	2%	10%	9%
TOTAL		100%	100%	100%	100%

4.4 SITE TRAFFIC AND FUTURE TOTAL TRAFFIC VOLUMES

Figure 4-2 to **Figure 4-3** illustrates the residential and retail site traffic as well as total site trips; future total traffic volumes are provided in **Figure 4-4**.

Figure 4-1: Proposed Residential Site Trips

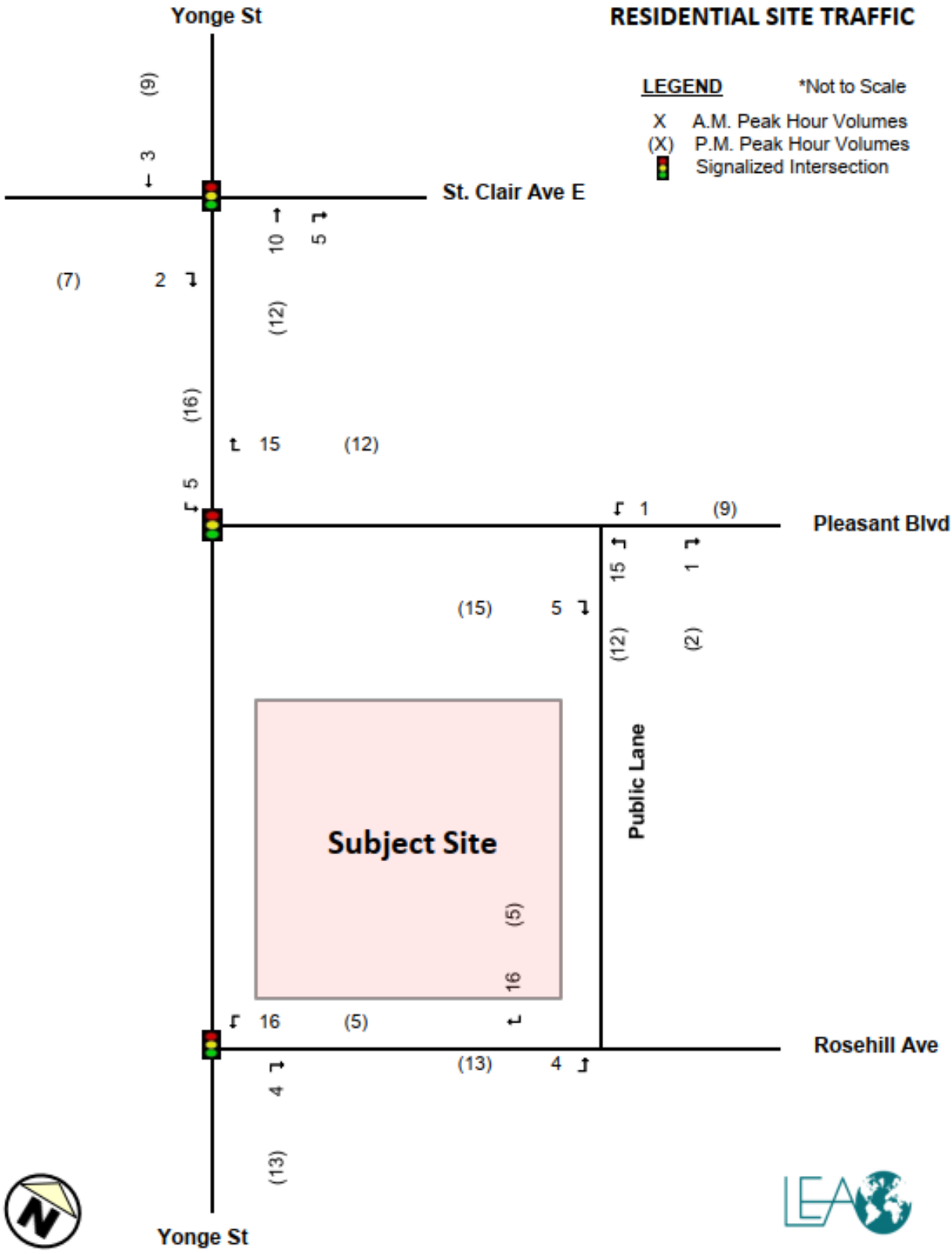


Figure 4-2: Proposed Retail Site Trips

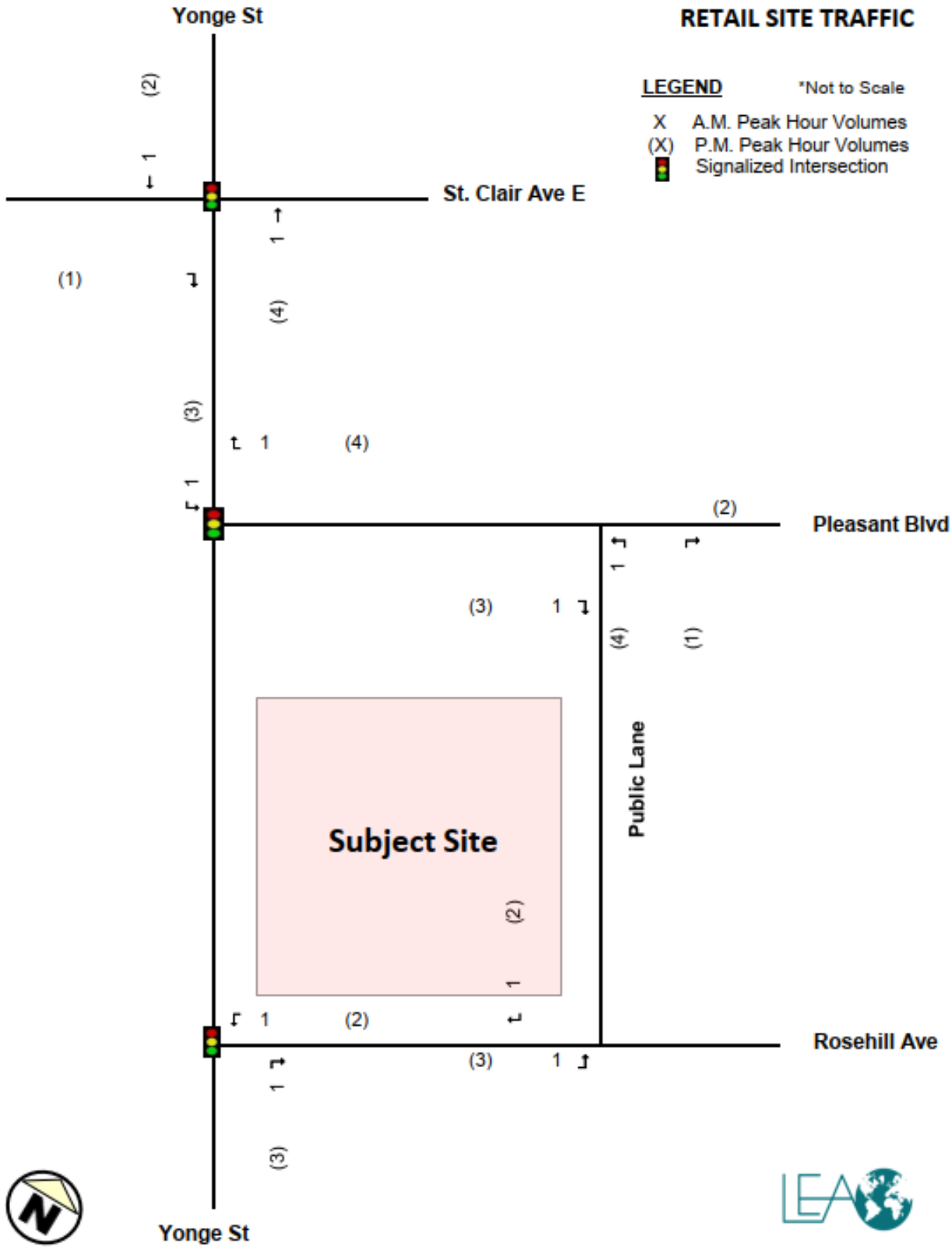


Figure 4-3: Total Site Trips

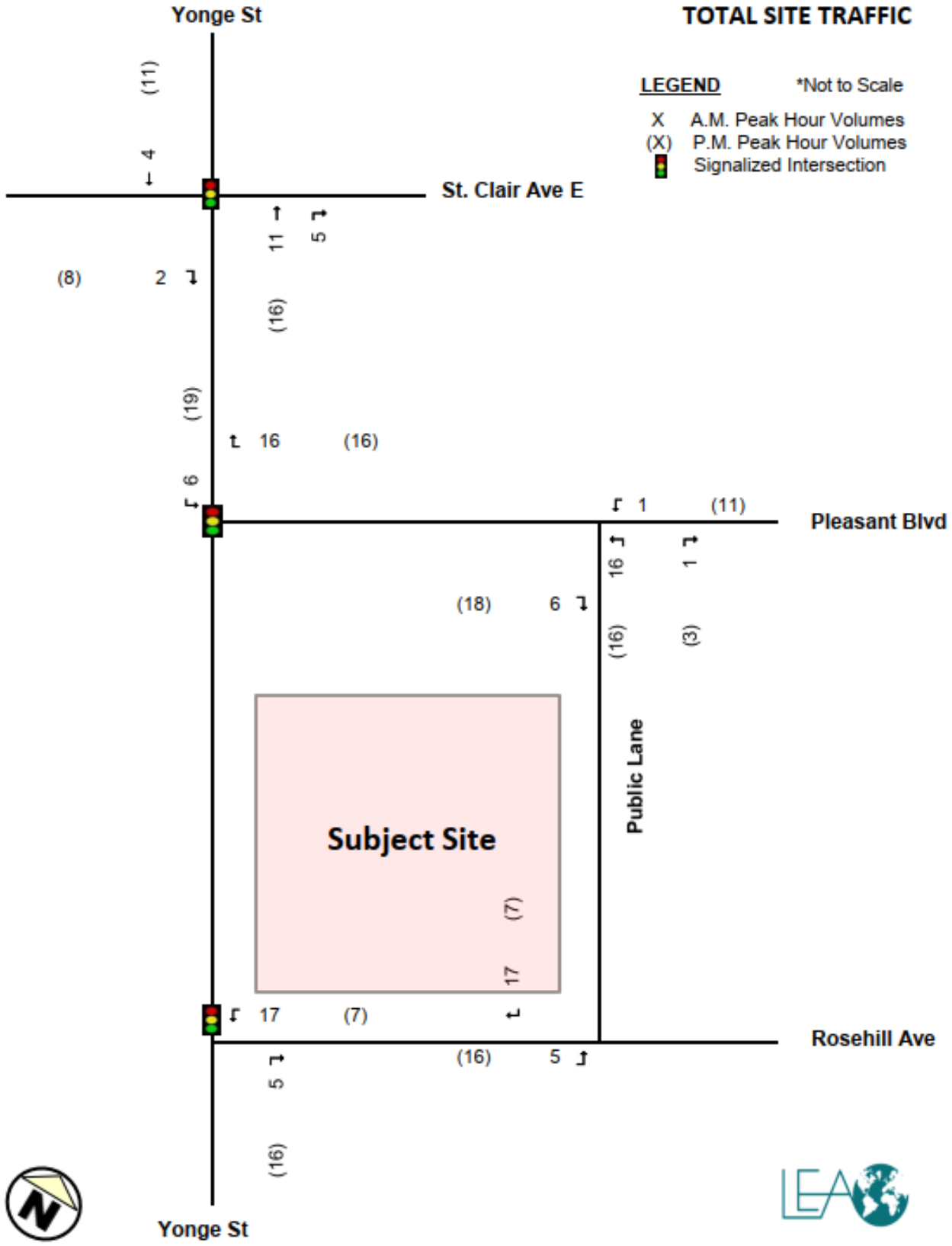
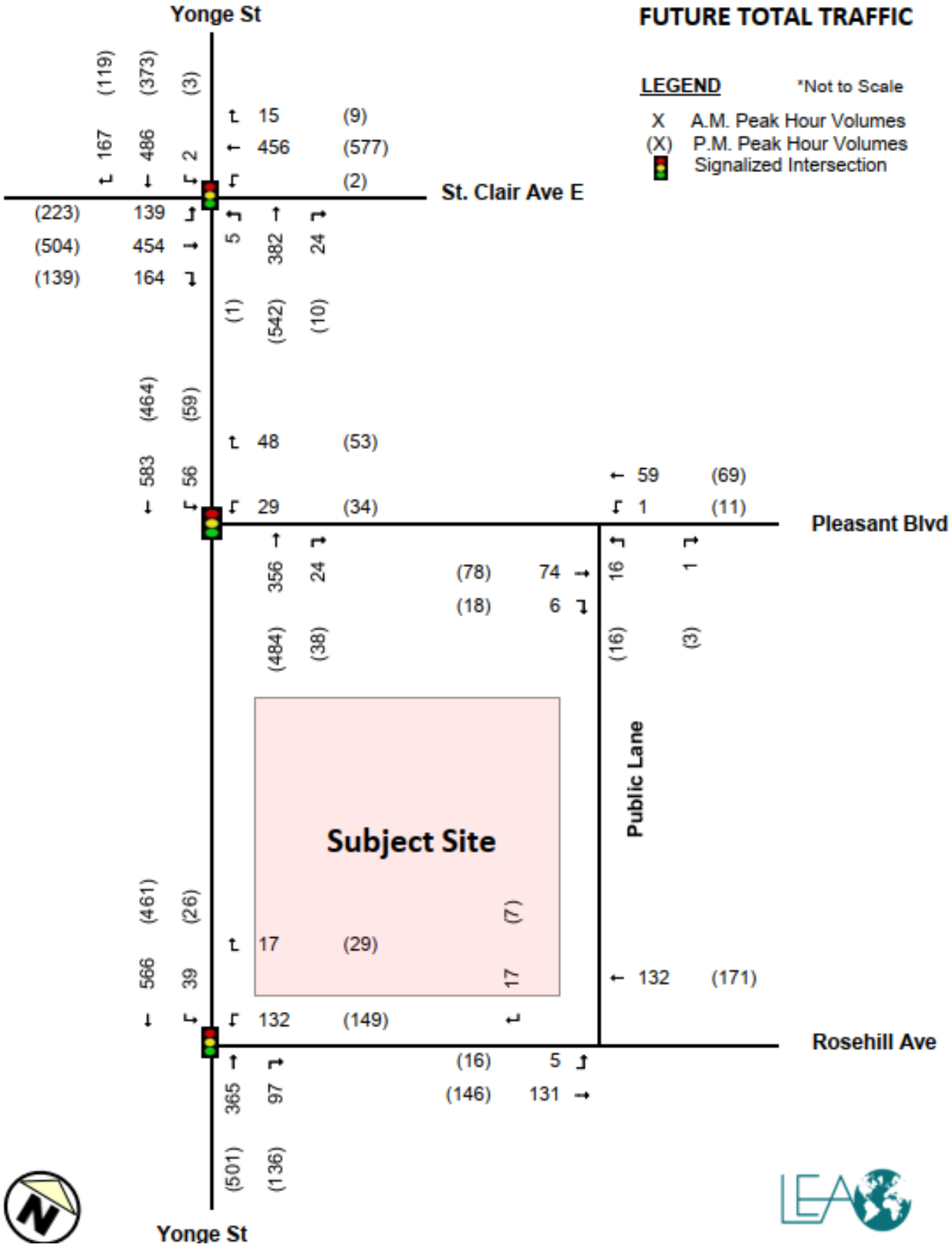


Figure 4-4: Future Total Traffic



5 INTERSECTION CAPACITY ANALYSIS

The intersection capacity analysis was undertaken using Synchro version 11.0, which is based on the Highway Capacity Manual 2000 methodology. Critical movements are defined as movements with level-of-service (LOS) E or worse or a volume-to-capacity (V/C) ratio greater than 0.85 for through and right-turn movements, and a V/C greater than 0.90 for left-turn movements.

The default analysis parameters were used per the *City of Toronto's Guidelines for Using Synchro 11 (Including SimTraffic 11),* dated January 15, 2021.

Changes to Road Network

The intersection of Yonge Street & Pleasant Avenue as discussed in **Section 3.3** is expected to be signalized as indicated in the *1406-1438 Yonge Street* TIS. Refer to **Table 3-2** for the corresponding STPs.

5.1 SIGNALIZED INTERSECTIONS

The intersection capacity analysis is summarized by signalized intersections in the tables below. Detailed capacity results are provided in **Appendix D**.

5.1.1 Yonge Street & St. Clair Avenue

Table 5-1: Yonge Street & St. Clair Avenue

	Existing				Future Background (2028)				Future Total (2028)			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Weekday AM Peak Hour												
OVERALL	-	0.64	29	C	-	0.80	34	C	-	0.81	34	C
EBR	136	0.66	50	D	162	0.94	93	F	164	0.95	97	F
Weekday PM Peak Hour												
OVERALL	-	0.71	28	C	-	0.83	31	C	-	0.84	32	C

Under existing weekday peak hour (AM/PM) conditions, the intersection is operating within capacity with a V/C ratio less than 1.00 and at an acceptable LOS of C. No movements of interest were identified. The 95th percentile queue length for the eastbound right (EBR) movement is indicated to exceed the available storage capacity during the AM Peak Hour.

Under future background weekday peak hour conditions, the intersection is expected to continue operating at a LOS of C with a minor increase in delay. The EBR movement is expected to operate near capacity, with longer delays compared to existing conditions. The 95th percentile queue length for the EBR movement is indicated to exceed storage capacity during both peak hours.

Under future total weekday peak hour conditions, the intersection is expected to continue operating similar to future background conditions. The V/C ratios, delay, and queue lengths for all movements during both peak hours indicate minor changes with the added site traffic compared to future background conditions. No constraints were identified as a result of the added site traffic.

5.1.2 Yonge Street & Rosehill Avenue

Table 5-2: Yonge Street & Rosehill Avenue

	Existing				Future Background (2028)				Future Total (2028)			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Weekday AM Peak Hour												
OVERALL	-	0.55	13	B	-	0.64	12	B	-	0.65	13	B
PM PK HR												
OVERALL	-	0.62	16	B	-	0.70	16	B	-	0.73	17	B

Under existing weekday peak hour conditions, the intersection is operating within capacity with V/C ratios less than 1.00 and at an acceptable LOS of B. No movements of interest were identified. The 95th percentile queue lengths for all movements are indicated to be accommodated within the available storage.

Under future background weekday peak hour conditions, the intersection is expected to continue operating within capacity, with minimal changes to delay compared to existing.

Under future total weekday peak hour conditions, the intersection is expected to continue operating similar to future background conditions. The V/C ratios, delay, and queue lengths for all movements during both peak hours indicate acceptable changes with the added site traffic compared to future background conditions. The 95th percentile queue length for the westbound left (WBL) movement was indicated to exceed capacity during both weekday peak hour conditions.

5.1.3 Yonge Street & Rosehill Avenue Queue Summary

Table 5-3: Yonge Street & Rosehill Avenue - Queue Summary

Peak Hour	Mvmt	Available Storage	Existing		Future Background		Future Total	
			50th	95th	50th	95th	50th	95th
AM	WBL	32	22	40	23	42	27	49
PM	WBL	32	25	45	27	47	29	51

Although the 95th percentile queue length for WBL movements is expected to exceed the available storage length under future total conditions, it is a minor increase from the future background conditions and appears to have minimal impact on the LOS for the intersection.

5.2 UNSIGNALIZED INTERSECTIONS

The intersection capacity analysis is summarized by unsignalized intersections in the tables below. Detailed capacity results are provided in **Appendix D.**

5.2.1 Yonge Street & Pleasant Boulevard

Table 5-4: Yonge Street & Pleasant Boulevard

	Existing				Future Background (2028)				Future Total (2028)			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Weekday AM Peak Hour												
OVERALL	-	-	1	A	-	-	-	-	-	-	-	-
Weekday PM Peak Hour												
OVERALL	-	-	2	-	-	-	-	-	-	-	-	-
WBLR	50	0.32	38	E								

Under existing weekday peak hour conditions, the intersection is operating within capacity with V/C ratios less than 1.00 and at an acceptable LOS of A. The westbound left and right (WBR) movement was noted as a movement of interest due to the delay. The 95th percentile queue lengths for all movements are indicated to be accommodated within the available storage.

5.2.2 Yonge Street & Pleasant Boulevard – Future Conditions

Table 5-5: Yonge Street & Pleasant Boulevard - Future Signalized Conditions

	Existing				Future Background (2028)				Future Total (2028)			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Weekday AM Peak Hour												
OVERALL	-	-	-	-	-	0.63	13	B	-	0.66	15	B
Weekday PM Peak Hour												
OVERALL	-	-	-	-	-	0.50	11	B	-	0.54	13	B

As part of the TIS performed at 1406-1428 Yonge Street, the intersection at Yonge Street & Pleasant Avenue is planned to become a signalized intersection in the future. Under future background weekday peak hour conditions, the signalized intersection is expected to operate within capacity with V/C ratios below 1.00, minimal delay with acceptable LOS, and minimal queuing that is not expected to interfere with operations of nearby study intersections.

Under future total peak hour conditions, the intersection is expected to continue operating similar to future background conditions. The V/C ratios, delay, and queue lengths for all movements during both peak hours indicate acceptable changes with the added site traffic compared to future background conditions. No constraints were identified as a result of the added site traffic.

5.2.3 Pleasant Boulevard & Site Access

Table 5-6: Pleasant Boulevard & Site Access

	Existing				Future Background (2028)				Future Total (2028)			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Weekday AM Peak Hour												
OVERALL	-	-	-	-	-	-	-	-	-	-	1	A
NBLR	-	-	-	-	-	-	-	-	17	0.02	9	A
EBT	-	-	-	-	-	-	-	-	74	0.00	0	
EBR	-	-	-	-	-	-	-	-	6	0.00	0	
WBL	-	-	-	-	-	-	-	-	1	0.00	7	A
WBT									59	0.00	0	A
Weekday PM Peak Hour												
OVERALL	-	-	-	-	-	-	-	-	-	-	1	A
EBL	-	-	-	-	-	-	-	-	19	0.03	10	A
EBT	-	-	-	-	-	-	-	-	78	0.00	0	
WBT	-	-	-	-	-	-	-	-	18	0.00	0	
SBLR	-	-	-	-	-	-	-	-	11	0.01	7	A

Under future total weekday peak hour conditions, movements at the site access at Pleasant Boulevard are expected to operate well within capacity with V/C ratios below 1.00, minimal delay with acceptable LOS of A, and minimal queuing. No constraints were identified as a result of the added site trips.

5.2.4 Rosehill Avenue & Site Access

Table 5-7: Rosehill Avenue & Site Access

	Existing				Future Background (2028)				Future Total (2028)			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Weekday AM Peak Hour												
OVERALL	-	-	-	-	-	-	-	-	-	-	1	**A**
EBL	-	-	-	-	-	-	-	-	5	0.00	8	A
EBT	-	-	-	-	-	-	-	-	131	0.00	0	A
WBT	-	-	-	-	-	-	-	-	132	0.00	0	
SBLR	-	-	-	-	-	-	-	-	17	0.02	9	A
Weekday PM Peak Hour												
OVERALL	-	-	-	-	-	-	-	-	-	-	1	**A**
EBL	-	-	-	-	-	-	-	-	16	0.01	8	A
EBT	-	-	-	-	-	-	-	-	146	0.00	0	A
WBT	-	-	-	-	-	-	-	-	171	0.00	0	
SBLR	-	-	-	-	-	-	-	-	7	0.01	9	A

Under future total peak hour conditions, movements at the site access at Rosehill Avenue are expected to operate well within capacity with V/C ratios below 1.00, minimal delay with acceptable LOS of A, and minimal queuing. As a result of the added site trips, the 95th percentile queue length for WBL movements at Yonge Street & Rosehill Avenue was noted to exceed capacity during the AM peak hours.

6 MULTI-MODAL ANALYSIS

The City of Ottawa's Multi-Modal Level of Service (MMLOS) Guidelines were adopted to generate levels of service (LOS) to describe the convenience and comfort level of existing and proposed transit and active transportation infrastructure within the subject area. The results are presented on a scale of A to F, where A represents preferred conditions and F represents the least preferred conditions, depending on the criteria of each mode. It should be noted that LOS is not always the desired target for all modes, as each mode is considered independently, and the minimum LOS targets depend on the context of the street and surrounding area.

A breakdown of the calculations and lookup tables from the MMLOS Guidelines are provided in **Appendix E**.

6.1 TRANSIT LEVELS OF SERVICE (TLOS) EVALUATION

The transit level of service (TLOS) was conducted for the signalized study intersections along Yonge Street at St. Clair Avenue and Rosehill Avenue based on the "worst intersection" approach. It should be noted that the evaluation is only confined to surface bus routes within the area and does not consider the TTC subway line. **Table 6-1** summarizes the results for transit.

Table 6-1: Surface Transit Level of Service Evaluation

Intersection Evaluation	Criteria	Yonge St. & St. Clair Ave	Yonge St. & Rosehill Ave
TLOS	delay	D	B

The intersection of Yonge Street & St. Clair Avenue indicates a TLOS score of B since transit vehicles merge with general traffic on every approach excluding the eastbound (EB) approach to the intersection where there is a dedicated transit lane which leads to transit delays at the signalized intersection. At the Yonge Street & Rosehill Avenue intersection, the TLOS improves to B since there is a dedicated bus lane at stops, allowing buses to move out of the way when stopped, thus reducing transit delay. As noted above, the analysis does not consider the presence of the TTC subway line, which would provide grade-separated rapid transit access unencumbered by vehicle traffic. For full details, see **Appendix E**.

6.1.1 Future Background Transit Levels of Service (TLOS) Evaluation

Transit Level of Service (TLOS): No surface transit improvements were identified as being planned for the study area. Average delay for vehicle lanes used by buses at the two studied signalized intersections are expected to increase slightly between existing to future conditions, however the TLOS for the worst intersection approach remains the same as the existing. As a result, no changes are noted.

6.2 ACTIVE TRANSPORTATION EVALUATION

The pedestrian level of service (PLOS) and bicycle level of service (BLOS) evaluation was conducted for the "worst section" of the segment of Yonge Street between St. Clair Avenue and Rosehill Avenue. **Table 6-2** summarizes the results for both PLOS and BLOS.

Table 6-2: Pedestrian and Bicycling Level of Service Evaluation

Segment Evaluation	Criteria	Yonge St – St. Clair Ave to Rosehill Ave
PLOS	• sidewalk width • boulevard width • motor vehicle volume (AADT/lane) • presence of on-street parking • vehicle operating speed	C
BLOS	• type of cycling facility • street width • vehicle operating speed • width of bike lane (if present) • bike lane blockage (if present)	A

Pedestrian conditions on the analyzed segment indicates a PLOS of C on both the east and west sides of Yonge Street. There are sidewalks provided along the corridor, but conditions are somewhat impacted by the high motor vehicle traffic volume.

The analyzed segments indicate a BLOS of A since both the east and west sides of Yonge Street have a physically separated bike lane that is protected by bike lane bollards.

6.2.1 Future Background Pedestrian & Bicycle Levels of Service (PLOS/BLOS) Evaluation

For future pedestrian and bicycle level of Service no improvements to pedestrian or cycling infrastructure along the studied segment of Yonge Street were assumed; therefore, no changes to the PLOS and BLOS are expected compared to the existing evaluations.

6.3 SITE MULTI-MODAL LEVEL OF SERVICE ASSESSMENT

As indicated in **Table 4-3** in **Section 4.2.1**, the new two-way site trips estimated for transit, walking, and cycling modes are as follows:

- Transit: 119 in AM, 165 in PM;
- Walking: 15 in AM, 23 in PM; and
- Cycling: 40 in AM, 53 in PM

As discussed below, these new trips are expected to be supported by the multi-modal transportation network surrounding the subject site. In addition, the Transportation Demand Management (TDM) plan for the subject site (see **Section 9**) include strategies to support and encourage users to travel by alternative modes to driving.

6.3.1 Transit Trips

The proposed development is projected to generate 119 and 165 two-way transit trips during the weekday AM and PM peak hours, respectively.

The routes expected to be taken by the transit trips were estimated using 2016 TTS transit data for the same traffic zones used for mode split and vehicle trip distribution, filtered for outbound home-based trips during the weekday AM peak period. Detailed TTS results are indicated in **Appendix C**.

Table 6-3: TTS – Transit Route Distribution

Time/Direction	TTC 74 NB	TTC 74 SB	TTC 88 NB	TTC 88 SB	TTC 512 WB	TTC 512 EB	Line 1 SB	Line 1 NB
AM In	0%	1%	0%	1%	0%	8%	52%	38%
AM Out	2%	0%	1%	0%	7%	0%	70%	20%
PM In	0%	0%	0%	2%	0%	3%	22%	73%
PM Out	1%	0%	1%	0%	9%	0%	45%	45%

The distribution of transit trips within the study area is provided in **Table 6-3**. Line 1 Yonge-University is the primary transit route that is expected to be used, accounting for 89-95% of all transit trips depending on the time period/direction. Of the surface routes, the majority of riders will utilize the TTC Streetcar Route 512, 3-9% of trips depending on the time period/direction. The TTC Bus Route 74 and 88 will account for the remaining site transit trips.

Table 6-4: Site Transit Trip Distribution

Time/Direction	TTC 74 NB	TTC 74 SB	TTC 88 NB	TTC 88 SB	TTC 512 WB	TTC 512 EB	Line 1 SB	Line 1 NB
AM In	0	0	0	0	0	2	*17*	12
AM Out	1	0	1	0	6	0	62	18
PM In	0	0	0	2	0	3	24	78
PM Out	0	0	1	0	5	0	26	*27*

As detailed above in **Table 6-4**, site transit riders will predominately use the Line 1 Yonge-University subway. The highest period and direction will be the southbound movement during the weekday AM peak hour, when 85 additional site riders are expected. The Line 1 subway operates with a peak period frequency of 2-3 minutes, corresponding to 20-30 trains per hour. As a result, the projected site ridership will increase subway ridership by 2.8-4.3 riders per train. For all other periods and directions, ridership per train will be lower. Given these findings, no capacity concerns are anticipated for either surface or rapid transit routes.

6.3.2 Walking Trips

The proposed development is projected to generate 15 and 23 two-way walking trips during the weekday peak hours, respectively. This is in addition to the walking trips that represent the first/last connection for transit trips from/to the subject site. Given the low pedestrian volume relative to the existing sidewalk infrastructure available, no capacity constraints are anticipated.

6.3.3 Cycling Trips

The proposed development is projected to generate 40 and 53 two-way cycling trips during the weekday peak hours, respectively. These forecasted cycling trips are not anticipated to affect the existing cycling network greatly. Additionally, the recently implemented cycling improvements along Yonge Street with protected bike lanes near the subject site is expected to increase the likelihood of cyclists choosing to cycle to and from the proposed development.

7 PARKING ASSESSMENT

The following section reviews the applicable parking standards for the proposed development based on current zoning by-law requirements.

7.1 VEHICULAR PARKING REVIEW

7.1.1 City of Toronto By-law 89-2022

Citywide Zoning By-law 569-2013 as amended by By-law 89-2022 represents the latest direction to guide parking requirements for new development in the City of Toronto. The new city-wide parking by-law imposes maximum parking rates for new developments while subsequently removing parking minimums (except for visitor parking). Developments submitted after February 3rd, 2022, are subject to the By-law 89-2022 requirements.

Table 7-1 details the applicable parking requirements for the proposed development, which is located in Parking Zone "A", based on By-law 89-2022.

Table 7-1: Zoning By-law 89-2022 Vehicle Parking Standards

Use	Units/GFA	City of Toronto ZBL 89-2022 Parking Zone "A"				Proposed Supply
		Minimum		Maximum		
		Parking Rate	Min. Required	Parking Rate	Max Permitted	
1 bedroom	293	No Minimum	-	0.5	146	196
2 bedroom	296			0.8	237	
3+ bedroom	66			1	66	
Visitor Parking	655	2 + 0.01 sp./unit	8	5 + 0.1 sp/unit for the 6th subsequent units	71	8
Retail	384.8m^2	-	-	3.5/100m2	13	-
		TOTAL	8		535	204

As detailed in **Table 7-1**, By-law 89-2022 permits a maximum of 535 parking spaces and requires a minimum of 8 visitor parking spaces. The proposed parking supply of 204 spaces, which includes 8 accessible and 28 small-car vehicle parking spaces, meets both maximum and minimum parking requirements outlined in the City's By-law 89-2022. As there is a site-specific exception with regards to the small-car parking supply for the site, further justification has been provided in the section below.

7.1.2 Small-Car Parking Justification

The subject site is governed by the City of Toronto's Zoning By-law 569-2013, under which a site-specific By-law exception applies. The subject site is required to provide small-car parking requirements outlined in the former City of Toronto By-law 438-86, as the site is subject to *Site-Specific Exceptions* contained in By-law 569-2013, which states:

> (M) Despite Regulations 200.5.1.10(2), a maximum of 10 percent of the required parking spaces may have minimum dimensions of:
>
> i. length of 5.1 metres;
>
> ii. width of 2.3 metres;
>
> iii. vertical clearance of 1.7 metres; and

iv. the side of the parking space may be obstructed;

The subject site proposes to provide 28 small-car spaces, which equates to approximately 14% of the total supply proposed. It should be noted that the proposed small-car spaces on-site will have a length of 5.3 m, which is sufficient to accommodate most SUVs and sedans.

Additionally, as the site is located in an area of the City that has access to exceptional transit and active transportation, it is expected that most trips to/from the subject site will use non-car modes. The site is within walking distance to TTC subway and bus service at St. Clair subway station, as well TTC streetcar service along St. Clair Avenue East. As detailed in the site's modal split in **Section 4.1**, transit and active transportation will account for 76% of trips to the development's residential component. Transit and active transportation to access the site's retail use is 47%.

Given these factors, the site does not expect to see an increase in larger sized vehicles. As well, the proposed small-car parking spaces will accommodate the majority of typical passenger vehicles driven in the City and the site's location will encourage future residents and visitors to use the available non-car modes as predominant modes of travel to and from the site. Therefore, the small-car parking supply should be considered appropriate.

7.1.3 Accessible Parking

Accessible parking for the proposed development will use requirements from amended By-law 579-2017 of parent By-law 569-2013. It is noted that these rates were approved by the City for the previous development application at the same site. **Table 7-2** shows the amount of accessible parking required based on By-law 579-2017 rates.

Table 7-2: Accessible Parking Rates – By-law 579-2017

Required Parking	Parking Rate	Required Spaces	Proposed Spaces
204 (residential + Visitor)	If more than 100, a minimum of 4 parking spaces plus 1 space for every 50 parking spaces or part thereof	8	8
	Total	**8**	**8**

The proposed development will provide 8 accessible parking spaces as required by By-law 579-2017 accessible parking rates applicable to the subject site.

7.1.4 Electric Vehicle Charging Requirements

The proposed development will be using Toronto Green Standards (TGS) Version 3 (V3) to provide updated electric vehicle (EV) infrastructure requirements for on-site vehicle parking. The requirements and proposed EV charging outlet are summarized in **Table 7-3**.

Table 7-3: Electric Vehicle Parking Supply By-Law 569-2013

Use/Type	Parking Supply	Parking Rate/Space	Total EV Parking
Residential Parking	196	0.2	40
Non-Residential Parking	8	0.2	2
		Total EV Outlets	42

The proposed development is required to supply a total of 42 EV charging outlets per TGS V3 requirements.

7.2 BICYCLE PARKING

The bicycle parking provision of the proposed development has been assessed according to the standards in the City of Toronto Zoning By-Law 569-2013. The subject site is located in Bicycle Zone 1, and the required bicycle parking spaces and proposed provisions are summarized in **Table 7-4**. Of note, the retail use is not required to provide any bicycle parking spaces as it has GFA that is less than 2,000m.

Table 7-4: By-law 569-2013 Bicycle Parking Requirement

Land Use	Units	Parking Type	Bicycle Parking Rate	Required Bicycle Parking	Proposed Bicycle Parking
Residential	655	Long Term	0.9 spaces/unit	589	589
		Short Term	0.2 spaces/unit	131	132
			TOTAL	720	721

A total of 721 bicycle spaces will be provided: 132 short-term bicycle parking spaces proposed close to the residential and commercial entrances, and 589 long-term bicycle parking spaces located in secure bike storage room on Parking Level 2 (P2).

8 LOADING REVIEW

Loading spaces for the proposed development must adhere to the loading standards set out in The City of Toronto Zoning By-law 569-2013 which is summarized below in **Table 8-1**.

Table 8-1: Zoning By-Law 569-2013 Loading Standards

Number of Units	Minimum Number of Loading Spaces Required	Loading Spaces Provided
400 dwelling units or more	1 Type "G" and 1 - Type "C"	1 Type “G” and 1 Type “C”
Retail Gross Floor Area	**Minimum Number of Loading Spaces Required**	**Loading Spaces Provided**
0 to 499 square metres	None required	None Provided

Detailed Swept path diagram for loading vehicles and garbage trucks are provided in **Appendix F**.

9 TRANSPORTATION DEMAND MANAGEMENT (TDM)

The subject site will be meeting Tier 1 Performance Measures listed under the Toronto Green Standards Version 3 (TGS V3) for Mid- to High-Rise Residential and Non-Residential developments. This section will review the TGS V3 development features based on the applicable requirements for the study area. Overall, the proposed development is compliant with TGS V3 as currently proposed. Recognizing Transportation Demand Management (TDM) is a significant component of the TGS, the following section will review the applicable TGS V3 requirements and associated TDM measures, as well as additional TDM measures proposed for the subject site to support and encourage non-single-occupant vehicle (SOV) travel.

9.1 LOW EMISSIONS TRANSPORTATION

9.1.1 Single-Occupant Vehicle Trips

Section AQ 1.1 of TGS V3 requires developments to reduce single occupancy auto vehicle trips generated by the proposed development by 15% through a variety of multimodal infrastructure strategies and Transportation Demand Management (TDM) measures. This section only applies where a Transportation Impact Study (TIS) is required. However, the subject site meets this requirement as the proposed development includes a TDM plan, which will be discussed in greater detail in **Section 9.3.5.**

9.1.2 Electric Vehicle Infrastructure

Section AQ 1.2 of TGS V3 requires developments to provide parking spaces equipped with an energized outlet in accordance with Zoning By-Law 569-2013. For all other residential and non-residential parking spaces, at least 20 percent of parking spaces must include an energized outlet. **Table 7-3** in **Section 7.1.4** summarizes the required Electric Vehicle (EV) parking supply.

The proposed residential parking spaces will be outfitted with an energized outlet to ensure EVs can be accommodated on-site, thus supporting sustainable travel options for the subject development. The new EV infrastructure will help enable a wider range of individuals to have access to parking spaces that support low emission transportation modes.

9.2 CYCLING INFRASTRUCTURE

9.2.1 Bicycle Parking Rates

Section AQ 2.1 of TGS V3 requires developments to provide bicycle parking spaces in accordance with Zoning By-Law 569-2013. These rates will inform the bicycle parking supply to be provided on-site to accommodate travel by bicycle to and from the subject site for residents, visitors, and employees. The proposed development will provide bicycle parking facilities to support and encourage active transportation and travel by bicycle in place of a personal vehicle for residents and visitors.

9.2.2 Long-Term Bicycle Parking Location

Section AQ 2.2 of TGS V3 requires developments to provide long-term bicycle parking in a secure controlled-access bicycle parking facility or purpose-built bicycle locker on the first or second storey of the building or on levels below ground commencing with the first level below ground. Long-term bicycle parking can be provided on levels below ground when at least 50 percent of the area of the level is occupied by bicycle parking spaces

until all required spaces have been provided. However, required spaces such as elevator shafts and mechanical rooms are omitted when calculating for the net area of a level.

The subject development proposes placing long-term bicycle parking spaces on the Mezzanine Floor and parking level 2. Bicycle parking will be provided in a designated storage room within the building, thus providing a safe, convenient location for individuals to access the bicycle parking supply.

9.2.3 Short-Term Bicycle Parking Location

Section AQ 2.3 of TGS V3 requires developments to provide short-term bicycle parking in a highly visible and publicly accessible location at-grade or on the first parking level of the building below grade. Short-term bicycle parking spaces must be no more than 30 m from a pedestrian entrance to the principal building on the lot. The location and dimensions of the elevator must facilitate easy access for bicycles.

The site plan for the subject site proposes to provide short-term bicycle parking at grade. The subject site therefore meets this requirement through appropriate provisions in the site plan.

9.2.4 Shower and Change Facilities

Section AQ 2.5 of TGS V3 requires developments to provide shower and change facilities consistent with the rate identified in Zoning By-Law 569-2013. Since the proposed development isn't required to provide non-residential bicycle parking spaces, on-site shower and change facilities are not required.

9.3 PEDESTRIAN INFRASTRUCTURE

Section AQ 3.1 of TGS V3 requires developments to provide safe, direct, universally accessible pedestrian routes that connect the buildings on-site to the off-site pedestrian network and priority destinations. The subject site meets this requirement as the site plan for the proposed development incorporates several elements to maintain and improve pedestrian access and permeability through the subject site.

Entrances to the building will connect to the sidewalk along Yonge Street and the two-way driveway north of the site.

Section AQ 3.2 requires developments to provide a context-sensitive pedestrian clearway that is a minimum of 2.1 m wide, to safely and comfortably accommodate pedestrian flow. A 2.1m walkway has been provided along Yonge Street and Rosehill Avenue.

Section AQ 3.3 of TGS V3 requires developments to provide covered outdoor waiting areas for pedestrian comfort and protection from inclement weather. The subject site will provide a covered area in front of the main entrance.

Section AQ 3.4 of TGS V3 requires developments to provide pedestrian scale lighting that is evenly spaced, continuous and directed onto sidewalks, pathways, entrances, outdoor waiting areas and public spaces. The subject site will explore appropriate pedestrian scale lighting throughout the site plan, with further details to be provided as the site plan undergoes further refinement. These measures will foster a safer experience for pedestrians regardless of the time of day and promote walking, biking, and riding public transit as a viable option to travel to and from the subject site.

9.3.1 Parking and Travel-Based Strategies

Minimal parking on-site.

As discussed in **Section 7,** a parking supply is in line with requirements in By-law 89-2022 requirements. This is also in line with the latest policy direction supported by City Council towards eliminating parking requirements for most uses to avoid an oversupply of parking and to support the City's sustainability and climate-change goals. By providing minimal on-site parking, the site will attract residents who predominantly use transit or walk/bike as their primary travel modes and will generate a limited number of daily single-occupant vehicle trips as a result.

The proposed development is representative of a shift away from an auto-oriented site context towards one that supports active transportation at-grade and public transportation in the area. The nature of the proposed development will encourage pedestrian activity, including for individuals connecting to transit or travelling by bike to nearby facilities on-street or within the nearby trail system.

On-street Vehicle Parking and Pick-up/drop-off activity.

On-street parking is available along Rosehill Avenue at select times and along Pleasant Boulevard in certain sections for the occasional vehicle user if needed. Public parking (Green Parking) is provided by the City of Toronto adjacent to the site on Rosehill Avenue which requires a parking permit and allows parking between certain set hours.

The proposed development is within walking distance to many TTC bus stops, and it is assumed that most travel to and from the site will not require the use of SOVs.

9.3.2 Cycling-Based Strategies

On-site bicycle parking and maintenance facilities.

The proposed development will provide long-term bicycle parking on the Mezzanine Floor and parking level 2, and short-term bicycle parking at grade. The provision of this dedicated bike storage room will make cycling a convenient and attractive option for future residents and individuals travelling to and from the subject site by bicycle.

Long-term bicycle parking will be provided at a rate of 0.9 spaces per unit for residents. Short-term bicycle parking will be provided at a rate of 0.2 spaces per unit for visitors.

In addition to the bicycle parking supply, additional bicycle amenities are proposed on-site, such as one bike repair stations for the long-term parking supply, to further support residential cycling as a primary travel mode.

Promote and increase cycling awareness and multi-modal transport.

It is recommended that information packages be provided to residents of the proposed development to help encourage active transportation and increase awareness of different travel alternatives. The package should include information regarding the environmental and health benefits of cycling, rules of the road, as well as maps of active transportation infrastructure available in the surrounding area.

9.3.3 Pedestrian-based Recommended Strategies

Building entrances oriented the street with direct connections to pedestrian pathways.

The proposed retail entrances fronting onto Yonge Street will connect to the sidewalk along Yonge Street, while the residential entrances will connect to the two-way driveway north of the site. This will provide convenient access for pedestrians, transit users and cyclists via continuous sidewalks and will feature landscaping to provide an overall comfortable and convenient pedestrian environment.

Improvements to the pedestrian and public realm.

A covered vestibule will provide shelter for residents and visitors will be provided at the main entrance, and plans for pedestrian scale lighting will be considered as the site plan continues to be refined.

9.3.4 Transit-based Strategies

Transit incentive program.

As PRESTO becomes a dominant form of payment for transit throughout the Greater Toronto and Hamilton Area (GTHA), it is recommended that pre-loaded PRESTO cards be offered to units in their welcome package. This incentive, coupled with the site's proximity to transit, provides an opportunity for residents to experience the benefits of using adjacent transit facilities.

9.3.5 Impact of TDM Measures

Transportation Demand Management (TDM) is a set of strategies that strive towards a more efficient transportation network by influencing travel behaviour. TDM strategies are critical in achieving a balanced multi-modal transportation system in the City of Toronto and supporting goals towards sustainable development as identified by the Toronto Green Standards (TGS) and TransformTO Net Zero Strategy to achieve net zero greenhouse gas emissions by 2040.

A specific requirement of the TGS Version 3.0 is to reduce single-occupancy vehicle (SOV) trips generated by a proposed development by at least 15%. Given the limited provision of on-site parking (0.31 spaces per unit), the site is expected to generate a very limited number of SOV trips. The proposed TDM plan will help further reduce site vehicle trip generation by increasing the convenience and attractiveness of transit and active transport alternatives. **Table 9-1** details the site TDM plan.

Table 9-1: TDM Measures Impact

Item	Description	Site Specific Notes	Estimated Daily Impact	Estimated Cost
Pedestrian-Based Strategies				
Pedestrian + Public Realm Improvements	Provide an attractive public realm and landscaping improvements.	The proposed development will include an attractive public and landscaping enhancements along the site's frontages on Yonge Street and Rosehill Avenue to increase pedestrian comfort. Retail site entrances will front onto Yonge Street while entrance to the residences will be provided via laneway access off Rosehill Avenue.	5% increase in pedestrian trips	n/a (site plan element)

Item	Description	Site Specific Notes	Estimated Daily Impact	Estimated Cost
Mixed Land Uses	Include a mix of on-site land uses.	The provision of on-site retail will help internalize site travel demand and provide several on-site destinations that encourage walking trips.		
Cycling-Based Strategies				
Residential Bicycle Parking	Residential bicycle parking satisfying the By-law 569-2013 requirements.	The proposed development will include 721 bike parking spaces, satisfy the required by-law minimums amount. Short-term bicycle parking will be located at ground level; long-term parking will be located within the P2 level and the Mezzanine Floor.	5-10% increase in cycling trips	n/a (site plan element)
Bike Repair Station	Install and maintain at least one (1) bike repair station for the long-term bike parking.	A bike repair station located within the P1 level.		$600-700 (1 station)
Transit-Based Strategies				
Complimentary Presto Card	Provide a complimentary Presto card to all residents at occupancy.	The provision of complimentary Presto cards will encourage the increased use of adjacent TTC services such as the Line 1 subway, Crosstown LRT, and TTC surface bus routes.	5-10% increase in transit trips	PRESTO: $16, 425 / month ($25 value per unit)
Travel Demand-Based Strategies				
Limited Residential Parking	Provide a limited supply of on-site residential vehicle parking (0.30 spaces per unit).	The limited provision of on-site parking will ensure that most residents choosing to live at the subject site are compatible with a car free lifestyle.	15 to 25% reduction in SOV trips	n/a
		Total	**15-25% reduction in SOV trips** **2-5% increase in pedestrian trips** **5-10% increase in cycling trips** **5-10% increase in transit trips**	**$16,425**

10 CONCLUSIONS

- The proposed mixed-use development will replace the existing empty lot with a a 50-storey building containing 655 residential units and 384.8 m^2 of retail GFA. A total of 204 parking spaces will be provided.
- The subject site is located in an area well-serviced by the Toronto Transit Commission (TTC) transit network. The subject site is within convenient walking distance of subway, streetcar, and bus service at St. Clair Subway Station, and also within walking distance of bus stops at the Yonge Street and St. Clair Avenue East intersection.
- The site is also expected to generate 70 and 59 vehicle trips in the AM and PM respectively, including private passenger and PUDO vehicle trips. In addition, the site is expected to generate 119 and 165 two-way transit trips during peak hours followed by 46 and 70 auto driver trips, and 40 and 53 cycling trips during the same hours.
- Under existing condition signalized and unsignalized intersections are operating within capacity and at good levels of service.
- Under future background conditions all current and proposed signalized and unsignalized intersections are operating within capacity and at good LOS with the exception of EBR movements at the intersection of Yonge Street & St. Clair Avenue. EBR movements there are expected to operate near capacity, with longer delays compared to existing conditions.
- Under future total conditions all signalized and unsignalized intersections operate within capacity and at good LOS. At the intersection of Yonge Street & St. Clair future total conditions operate similar to future background conditions with no constraint identified as a result of the added site traffic.
- A total of 204 residential parking spaces are proposed for the site at a parking rate of 0.31 spaces per unit.
- A total of 721 bicycle spaces will be provided which satisfies the by-law requirements.
- The proposed development will provide 1 Type "G" and 1 - Type "C" loading spaces compliant with By-law 569-2013 requirements.
- Transportation Demand Management measures will be implemented to reduce the proportion of single occupant vehicle (SOV) trips by at least 15%.