Crombie REIT

TRAFFIC OPERATIONS ASSESSMENT

PROPOSED MIXED-USE DEVELOPMENT

2026 Queen Street East, City of Toronto

December 2023

23226

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December 8, 2023

Reference Number: 23226.01

Robert Blacklock
Crombie REIT
5935 Airport Road, Suite 810
Mississauga, Ontario
L4V 1W5

RE: Traffic Operations Assessment
Proposed Mixed-Use Development
2026 Queen Street East, City of Toronto

Dear Mr. Blacklock,

LEA Consulting Ltd. (LEA) is pleased to present the findings of our Traffic Operations Assessment (TOA) for the proposed mixed-use development located at 2026 Queen Street East in the City of Toronto. This report provides an analysis of the existing and future traffic conditions of the site, a review of parking and loading provisions, and a Transportation Demand Management Plan. A functional design review has also been provided. This report concludes that the traffic associated with the planned development is acceptable.

Should you have any questions regarding this TOA, please do not hesitate to contact the undersigned.

Yours truly,

LEA CONSULTING LTD

Kenneth Chan, P.Eng., PTOE, PMP
Senior Vice President, Transportation Engineering and Planning

Joseph Doran, B. Eng., EIT
Project Coordinator

Encl. Traffic Operations Assessment – 2026 Queen Street East, City of Toronto, Proposed Mixed-Use Development (December 2023)

Disclaimer

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1 INTRODUCTION

LEA Consulting Ltd. (LEA) has been retained by Crombie REIT to undertake a Traffic Operations Assessment (TOA) for the proposed mixed-use development at 2026-2042 Queen Street East (herein referred to as the "subject site").

The subject site is located at the northwest corner of Queen Street East and Lee Avenue in the City of Toronto, as shown in **Figure 1-1.** The site is currently occupied by retail stores at-grade, including restaurants, a grocery store, and a yoga studio on the 2nd storey.

Figure 1-1: Site Location

Source: Google Maps, accessed November 2023

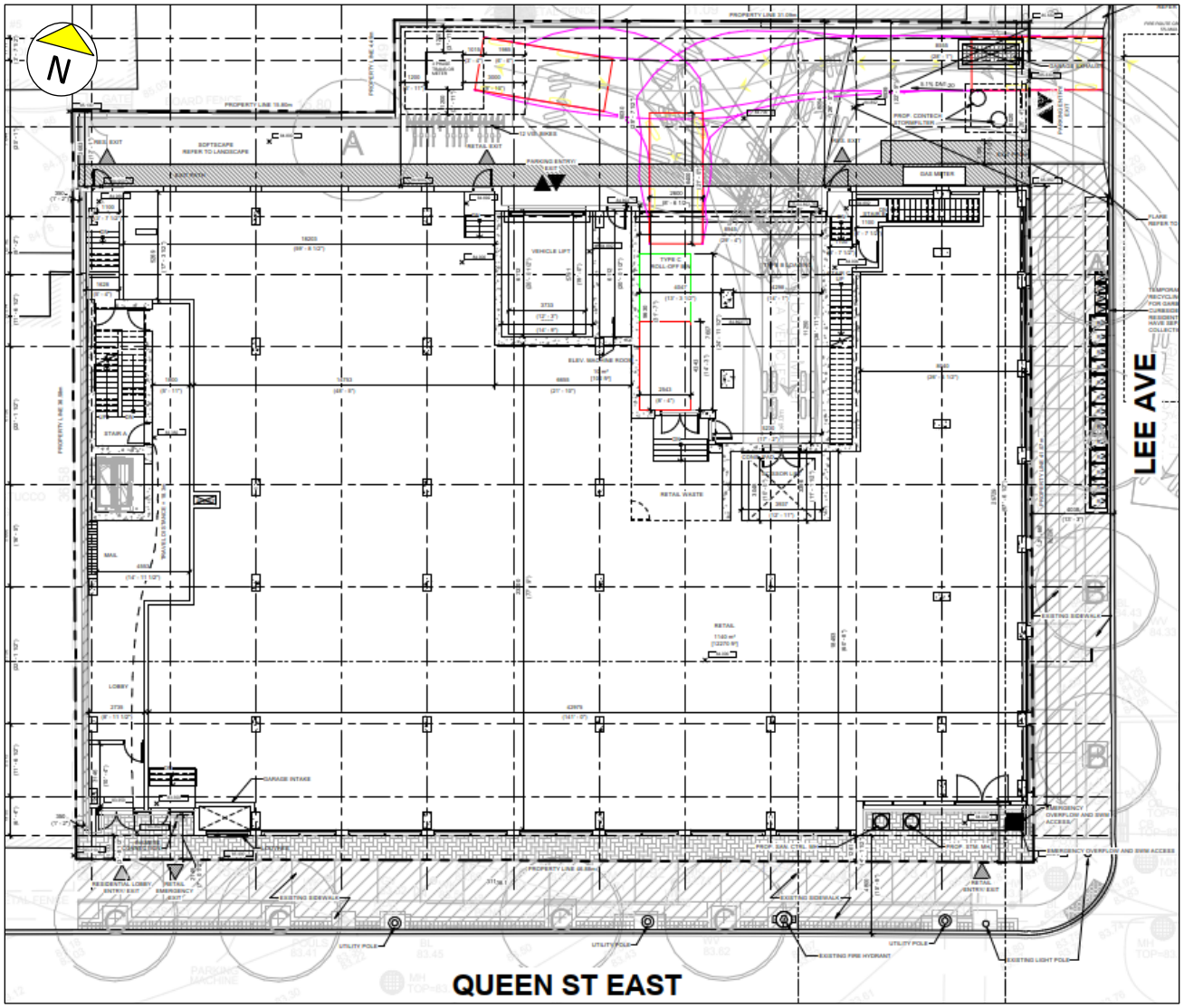
1.1 DEVELOPMENT PROPOSAL

The development proposal consists of a mixed-use building containing 60 residential units and 1,140 m^2 of commercial GFA. A total of 33 parking spaces are proposed within one level of underground parking, with an unsignalized full-movement vehicle access provided off Lee Avenue. Site statistics are presented in **Table 1-1.** The proposed ground floor plan is illustrated in **Figure 1-2.**

Table 1-1: Proposed Mixed-Use Redevelopment

Land Use	Units /GFA	Unit Mix
1-Bedroom	40 Units	67%
2-Bedroom	14 Units	23%
3-Bedroom	6 Units	10%
Residential Total	60 Units	100%
Retail	1,140m^2	-

Figure 1-2: Proposed Ground Floor Plan



Source: RAW Design, November 2023

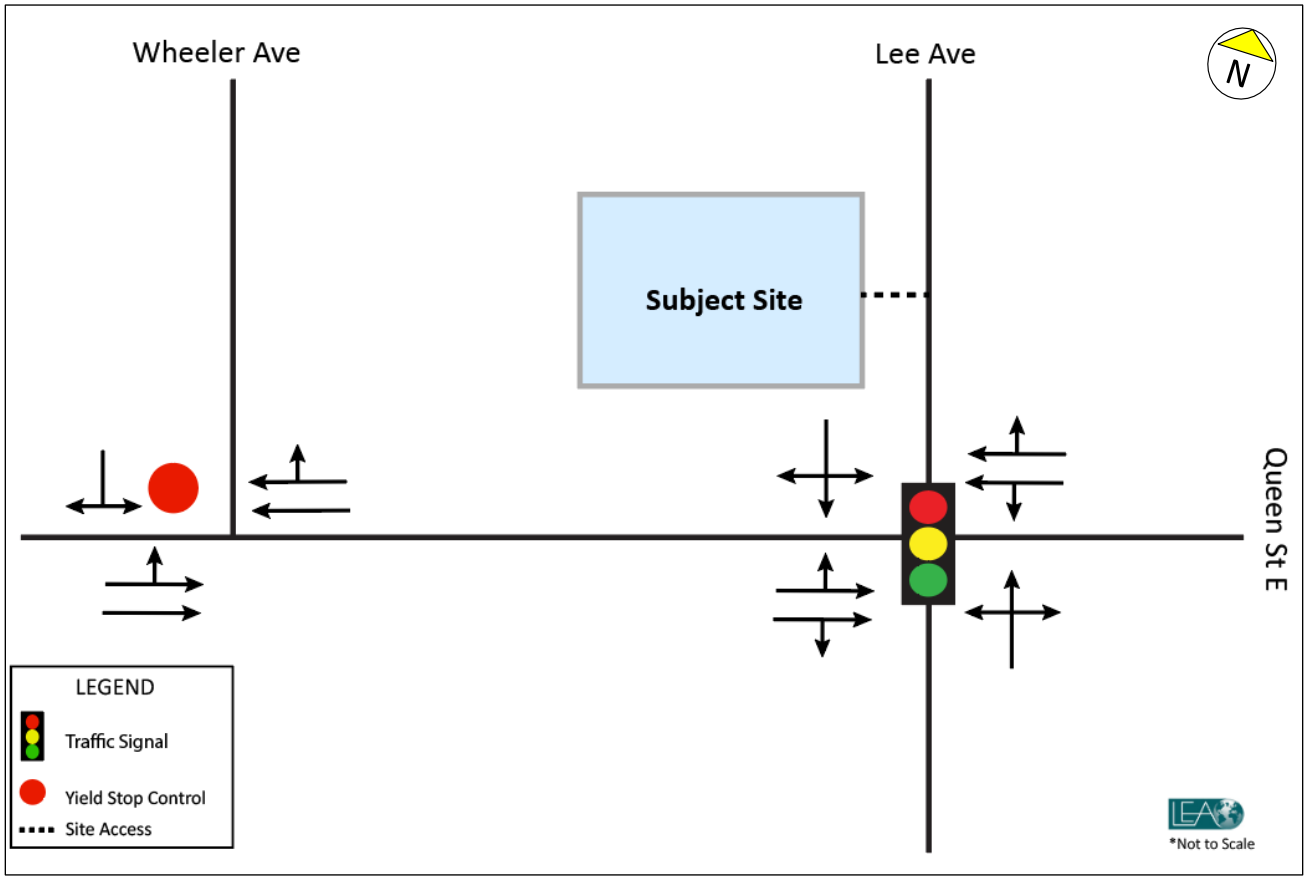
2 EXISTING & PLANNED TRANSPORTATION CONDITIONS

This section provides an overview of 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 impact on the existing road network.

2.1 ROAD NETWORK

The following section describes the road network within the study area, with the existing intersections and lane configuration illustrated in **Figure 2-1**. A description and classification of the roadways within the study area are outlined below.

Figure 2-1: Existing Intersection and Lane Configuration



Queen Street East is an east-west minor arterial road with a two to four-lane cross-section (one to two through lanes per direction). On-street parking is available on both sides of the street within the study area. The roadway operates with a posted speed limit of 40 km/h within the study area.

Lee Avenue is a north-south local road with a two-lane cross-section (one through lane per direction). On-street parking is permitted along the west side of the roadway within the study area. The roadway operates with a posted speed limit of 30 km/h.

Wheeler Avenue is a north-south local road with a two-lane cross-section (one through lane per direction) within the study area. The roadway operates with a posted speed limit of 30 km/h.

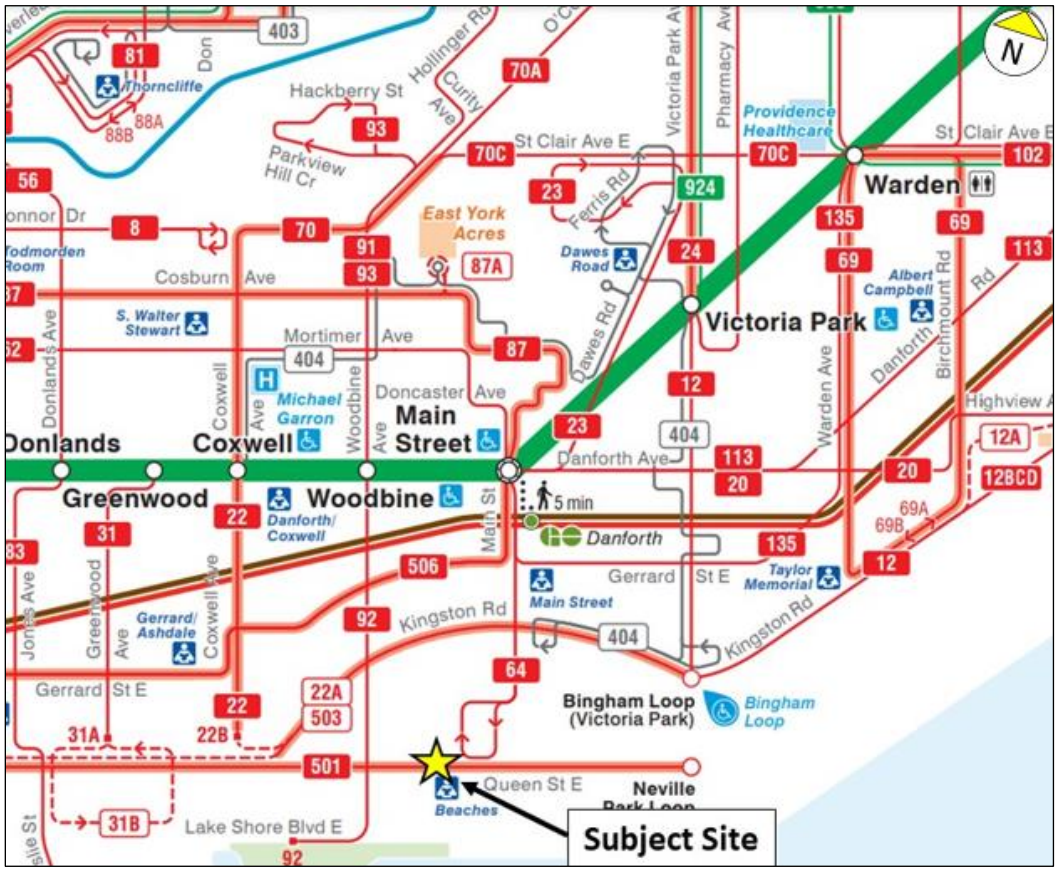
2.2 TRANSIT NETWORK

The subject site is located in an area well-serviced by the Toronto Transit Commission (TTC) network. There are a number of existing TTC surface transit routes within the study area, including the east-west streetcar Route 501 along Queen Street East and the north-south bus Route 64 along Wineva Avenue and Main Street.

Further, subway service is available via Main Station, located within a 29-minute walk or an 11-minute connecting bus ride, and Woodbine Station, located within a 34-minute walk or an 14-minute connecting bus ride, from the subject site. The Danforth GO Station on the Lakeshore East GO Train Line is also within a 2 km walking distance of the subject site, thus providing regional transit service within a similar 28-minute walk or 15-minute connecting bus ride.

The transit routes currently servicing the immediate and surrounding area are illustrated in **Figure 2-2.** The subject site has a TransitScore™ of 69/100, which categorizes the site as having "Good Transit" and indicates that there are many nearby public transportation options.

Figure 2-2: Existing Transit Network



Source: City of Toronto, Accessed November 2023

TTC Streetcar Route 501 – Queen is a streetcar route that operates generally in the east-west direction between Neville Park Loop in the Beaches and the Long Branch Loop in Etobicoke. The route also provides connections to Queen Station and Osgoode Station on TTC Subway Line 1 Yonge-University. The route is part of the 10-Minute Network, and operates 10 minutes or better all day, every day.

> *Access Location: Route 501 is accessible in the study area at the intersection of Queen Street East at Bellefair Avenue (within 120 m or a 2-minute walk from the subject site).*

TTC Streetcar Route 301 – Queen Blue Night is a streetcar route that operates generally in the east-west direction between Neville Park Loop and the Long Branch Loop. The route also provides connections to Queen Station and Osgoode Station on TTC Subway Line 1 Yonge-University. The route operates Monday to Saturday, between 6:00AM and 1:30AM and Sunday between 8:00AM and 1:00AM with headways of 30 minutes.

> *Access Location: Route 301 is accessible in the study area at the intersection of Queen Street East at Bellefair Avenue (within 120 m or a 2-minute walk from the subject site).*

TTC Bus Route 64 – Main is a bus route that operates generally in the north-south direction between the Main Street Station and Wineva Avenue at Queen Street East. The route operates Monday to Saturday, between 6:00AM and 1:30AM, and Sunday between 8:00AM and 1:00AM with headways of 30 minutes.

> *Access Location: Route 64 is accessible in the study area at the intersection of Hambly Avenue at Queen Street East North Side (within 170 m or a 2-minute walk from the subject site).*

2.3 CYCLING NETWORK

The existing and future cycling network surrounding the subject site are indicated in this section.

2.3.1 Existing Cycling Network

The subject site has a BikeScore™ of 85/100, which categorizes the site as “Very Bikeable” and indicates that cycling is convenient for most trips.

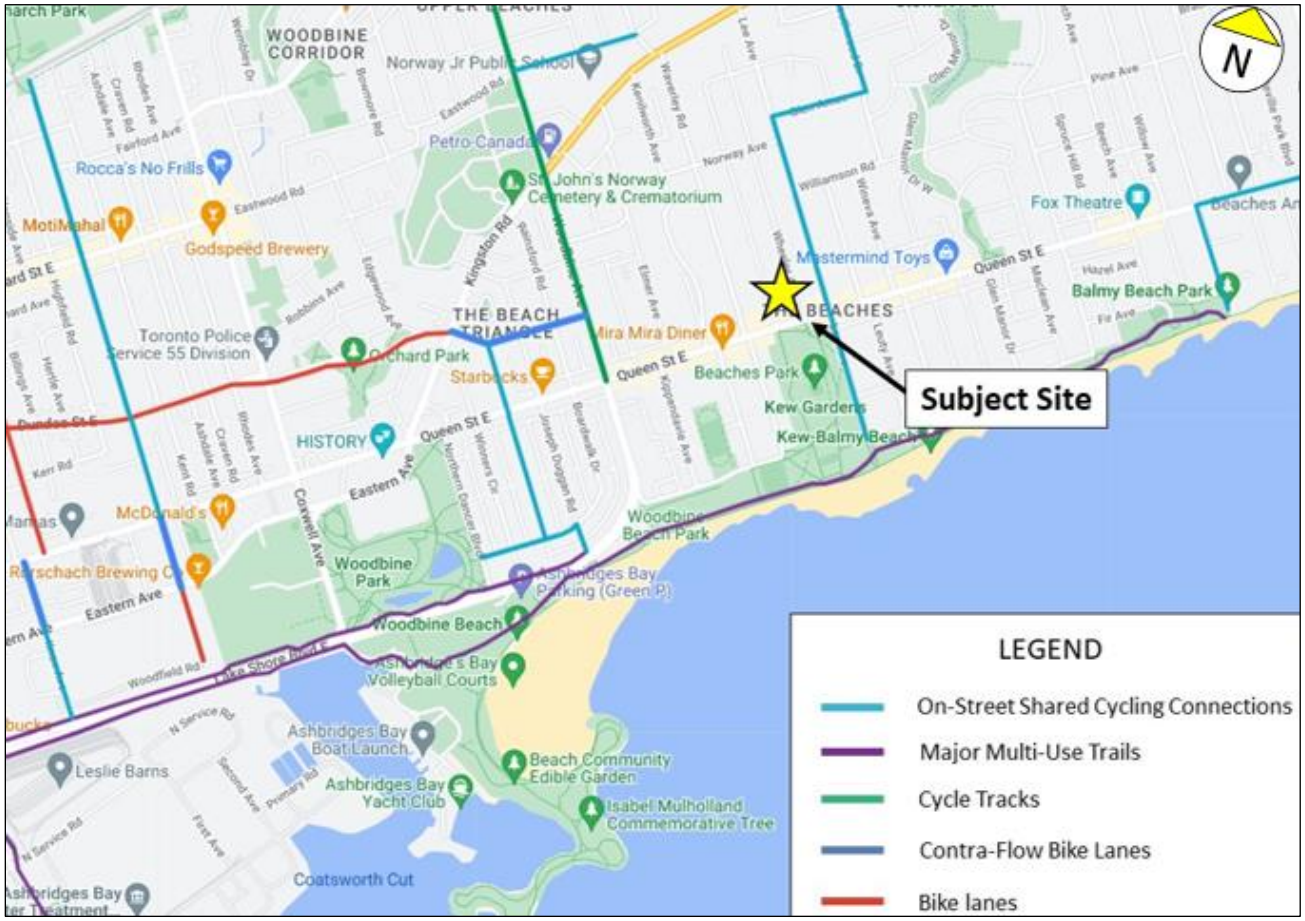
On-street shared cycling connections are provided along Lee Avenue, directly east of the subject site, which connects to major multi-use trails along Lakeshore Boulevard East, adjacent to Woodbine Beach Park.

Further, cycle tracks are provided along Woodbine Avenue and bike lanes are provided along Dundas Street East, which can be accessed via the network of multi-use trails and shared on-street connections in the area.

The cycling facilities provide connections to parks throughout the city, such as Balmy Beach Park and Kew Gardens. A City of Toronto Bike Share docking station is also located at 85 Lee Avenue, within 60 m, or a one-minute walk, of the subject site.

The existing cycling network surrounding the subject site is illustrated in **Figure 2-3.**

Figure 2-3: Existing Cycling Network



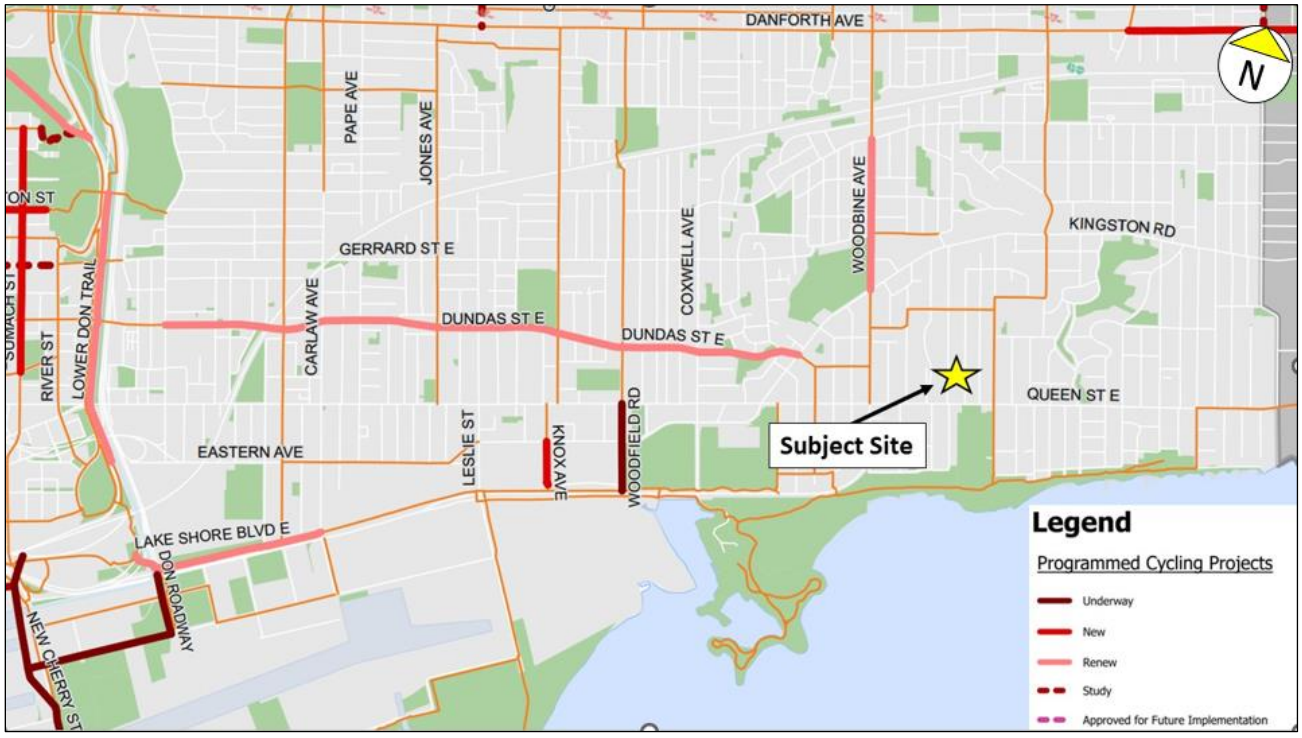
Source: City of Toronto, Accessed November 2023

2.3.2 Future Cycling Network Improvements

The City's Cycling Network Plan has been adopted by the City Council to enhance the existing cycling network. The City's 2022-2024 Near-Term Implementation Program outlines the planned cycling network improvements that are expected to occur over the next two years.

Of note, key bicycle facilities in the surrounding area are planned to be maintained, such as the nearby shared on-street connections along Lee Avenue and the multi-use trail system along the waterfront, or renewed, such as facilities on Dundas Street East and Woodbine Avenue. This will help to maintain and develop east-west and north-south connections to, from, and beyond the subject site, and will enforce cycling as a viable transportation mode for future residents and visitors of the subject development. **Figure 2-4** illustrates the cycling improvements relative to the subject site.

Figure 2-4: Future Cycling Network



Source: City of Toronto, Accessed November 2023

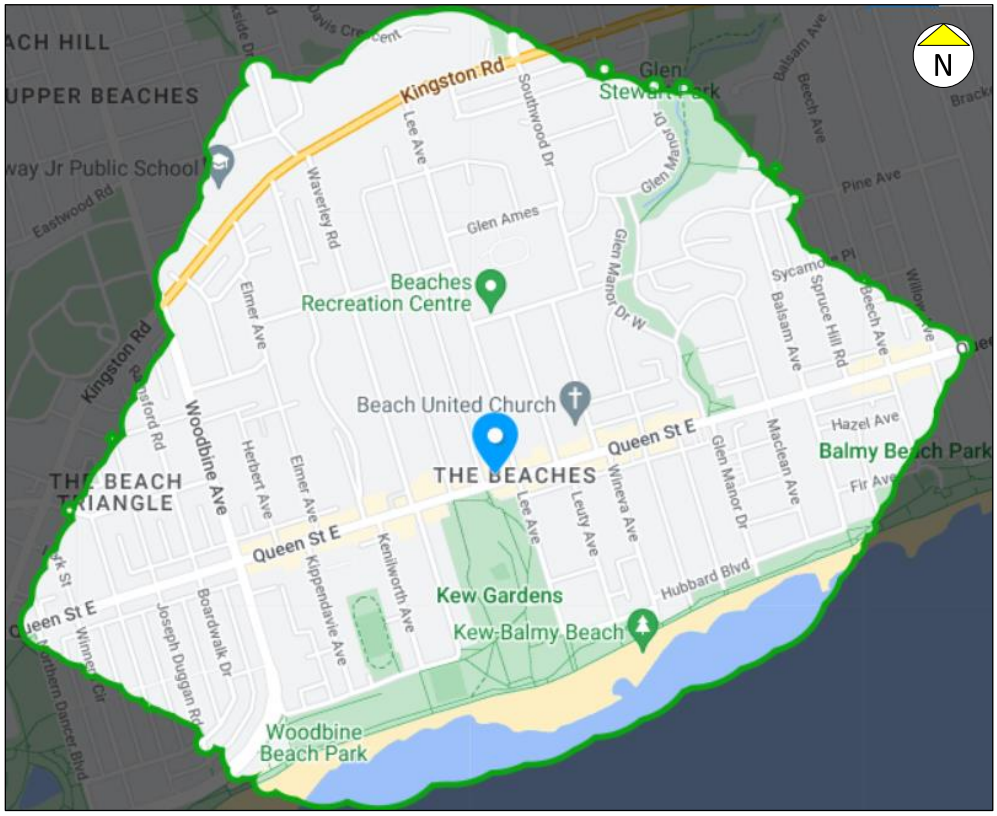
2.4 PEDESTRIAN NETWORK

The subject site has a Walk Score™ of 97/100, which categorizes the site as a "Walker's Paradise" and indicates that daily errands do not require a car. The area surrounding the subject site is very walkable, with sidewalks along both sides of Queen Street East, Lee Avenue, and Wheeler Avenue. Pedestrian crosswalks with pedestrian phases are available at all approaches at the signalized intersection of Queen Street East and Lee Avenue.

As illustrated in **Figure 2-5**, a 15-minute walk from the subject site could permit an individual to reach the intersection of Main Street and Kingston Road to the north, the intersection of Queen Street East and Silver Birch Avenue to the east, Woodbine Beach Park to the south, and the intersection of Queen Street East and Northern Dancer Boulevard to the west.

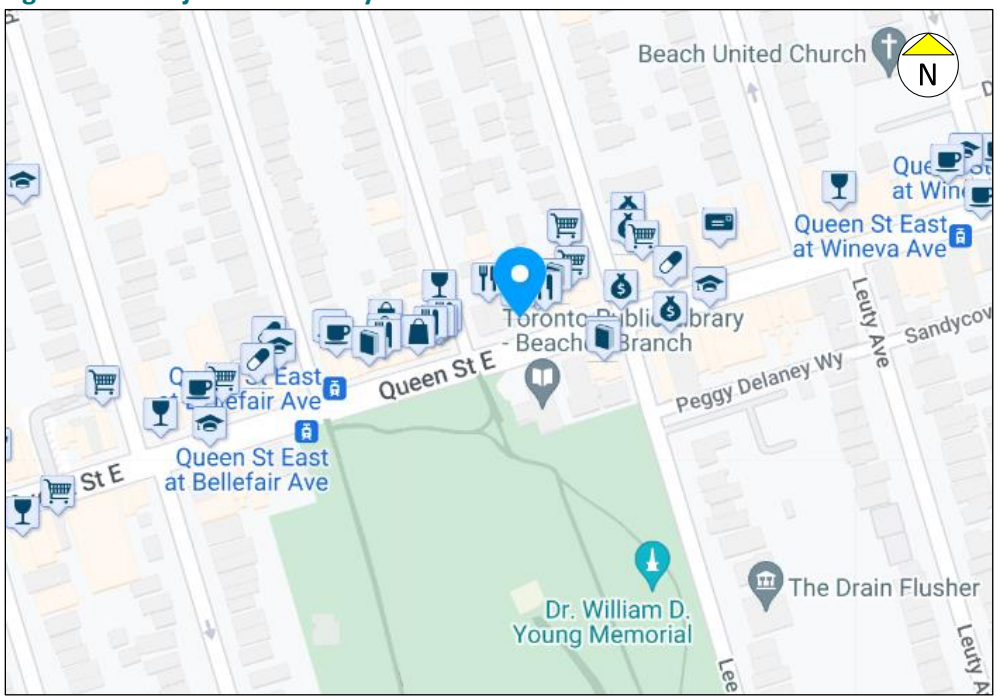
A range of retail and service destinations can be reached within a convenient walking distance, including grocery stores, pharmacies, eating establishments, public facilities such as parks, and the Toronto Public Library – Beaches Branch, as shown in **Figure 2-6**. Kew Gardens is across the street from the subject site, with Woodbine Beach Park also accessible via a 13-minute walk from the subject site, facilitating further connections to several other trails in the City.

Figure 2-5: 15-Minute Walking Distance from Subject Site



Source: WalkScore™, Accessed November 2023

Figure 2-6: Subject Site Nearby Amenities



Source: WalkScore™, Accessed November 2023

2.5 TRAFFIC DATA COLLECTION

Due to the relatively small scale of the proposed development and low peak hour vehicle trip generation, as further discussed in **Section 3**, an intersection capacity analysis was undertaken for only the proposed site access following full build-out. This was completed to ensure the proposed site access could accommodate the projected site traffic volumes without resulting in significant traffic impacts to the adjacent intersection of Queen Street East and Lee Avenue.

Existing turning movement counts (TMCs) were therefore obtained for the intersection of Queen Street East and Lee Avenue to determine the northbound through (NBT) and southbound through (SBT) volumes at the proposed site access. The TMCs were collected during the weekday AM and PM peak periods in March 2019 and were obtained from the City of Toronto. Detailed survey data and signal timing plans are available in **Appendix A**. A summary of the TMC data collected is outlined in **Table 2-1**.

Table 2-1: Summary of Traffic Data

Intersection	TMC Date	Source
Queen Street East and Lee Avenue	Tuesday, March 5, 2019	City of Toronto

As the TMCs were obtained during pre-pandemic conditions during the typical school year, no COVID-19 adjustment factors were performed. In addition, no growth was applied as no significant change has occurred in the area between the 2019 and 2022 conditions and an overall trend towards a decrease in traffic volumes since the COVID-19 pandemic has been observed for comparable traffic studies undertaken in Toronto.

3 SITE TRIP GENERATION

The development proposal consists of a mixed-use building containing 60 residential units and 1,140 m^2 (12,271 ft^2) of commercial GFA. Site statistics were rounded up to 13,000 ft^2 of commercial GFA as part of the analysis. Trip generation associated with the proposed development was estimated using the baseline average person trip rates provided in the *ITE Trip Generation Manual 11th Edition*. The following subsections outline the calculation and assignment of site-generated vehicle trips.

3.1 TRIP GENERATION

3.1.1 Residential Trip Generation

For the proposed residential use, ITE Land Use Code (LUC) 221 Multi-family Housing (Mid-Rise) in a General Urban/Suburban, Not Close to Rail Transit setting was applied to estimate person trips.

The local mode split was then applied to convert the estimated person trips to auto trips. The local mode split was determined based on 2016 Transportation Tomorrow Survey (TTS) data obtained for home-based work trips, and home-based school trips for the residential land use. Traffic analysis zones (TAZs) 1 and 251-258 were used.

Although the subject site is a proposed mixed-use development, no retail auto trips are being assumed as the proposed development will have no dedicated on-site customer parking spaces similar to its existing condition. Therefore, no site interaction trip reduction was applied. **Table 3-1** outlines the proposed site vehicle trip generation.

Table 3-1: Subject Site Vehicle Trip Generation

Land Use	Description	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
ITE LUC 221 – Multi-Family Housing (Mid-Rise) 60 units	ITE Person Trip Rate (/unit)	0.11	0.37	0.48	0.31	0.22	0.53
	ITE Person Trips	7	22	29	19	13	32
	Total External Trips	7	22	29	19	13	32
	External Auto Trips (35%)	**2**	**8**	**10**	**7**	**5**	**12**
Total Proposed Residential Site Auto Trips		**2**	**8**	**10**	**7**	**5**	**12**

The proposed development is predicted to generate 10 two-way auto trips (2 inbound and 8 outbound) during the weekday AM peak hour and 12 two-way auto trips (7 inbound and 5 outbound) during the weekday PM peak hour.

3.1.2 Retail Trip Generation

There are no retail vehicle trips generated, as the proposed development will have no dedicated on-site customer parking spaces similar to its existing condition. It has therefore been assumed that the existing retail travel behaviour would be maintained, and no new auto trips would be generated. Similarly, no existing retail auto trips were removed from the analysis.

To determine person trips for the proposed retail (supermarket) use compared to the existing store on-site, ITE Land Use Code (LUC) 850 Supermarket in a General Urban/Suburban, Not Close to Rail Transit setting was applied to estimate vehicle trips. The ITE-estimated vehicle trips were converted to person trips using baseline vehicle mode split and occupancy data. The estimated person trip generation of the proposed retail use compared to the existing is shown in **Table 3-2**.

Table 3-2: Retail Trip Generation

Land Use	Description	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed ITE LUC 850 – Supermarket 13,000 ft²	ITE Auto Trip Rate (/unit)	1.69	1.17	2.86	4.48	4.48	8.95
	ITE Auto Trips	22	15	37	58	58	116
	Conversion to Person Trips	27	18	45	74	72	146
	Total External Trips	**27**	**18**	**45**	**74**	**72**	**146**
	External Auto Trips (0%)[1]	**0**	**0**	**0**	**0**	**0**	**0**
Total Proposed Retail Person Trips		**27**	**18**	**45**	**74**	**72**	**146**
Existing ITE LUC 850 – Supermarket 5,155 ft²	ITE Auto Trip Rate (/unit)	1.69	1.17	2.86	4.48	4.48	8.95
	ITE Auto Trips	9	6	15	23	23	46
	Conversion to Person Trips	11	7	18	29	29	58
	Total External Trips	**11**	**7**	**18**	**29**	**29**	**58**
	External Auto Trips (0%)[1]	**0**	**0**	**0**	**0**	**0**	**0**
Total Existing Retail Person Trips		**11**	**7**	**18**	**29**	**29**	**58**
Difference		**+16**	**+11**	**+27**	**+45**	**+43**	**+88**

Note: 1 - It is assumed that future retail will have similar or fewer trips than the existing retail. As a result, no vehicle trips were assumed for the proposed retail, and no vehicle trips were removed for the existing retail.

The proposed retail use is predicted to generate 45 two-way person trips (27 inbound and 18 outbound) during the weekday AM peak hour and 146 two-way person trips (74 inbound and 72 outbound) during the weekday PM peak hour. Compared to existing conditions, the proposed development's retail use has an increase of 27 and 88 person trips in the AM and PM peak hour, respectively.

3.1.3 Subject Site Multi-Modal Trip Generation

As noted above, the local mode split was extracted from the 2016 TTS to identify the modal split during the weekday AM and PM peak periods for the subject site. The auto driver mode split for retail trips was proportionally redistributed across the other modes based on the 2016 TTS data. The subject site modal split and anticipated trips by mode are summarized in **Table 3-3.** Full details are provided in **Appendix B.**

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

Land Use	Description	Modal Split	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
Proposed Residential	**External Person Trips**	**100%**	**7**	**22**	**29**	**19**	**13**	**32**
	Auto Driver Trips	35%	2	8	10	7	5	12
	Passenger Trip	5%	0	1	1	1	0	1
	Transit Trips	44%	3	10	13	8	6	14
	Pedestrian trips	10%	2	2	4	2	1	3
	Cycling Trips	6%	0	1	1	1	1	2
Proposed Retail + Passby	**External Person Trips**	**100%**	**27**	**18**	**45**	**74**	**72**	**146**
	Auto Driver Trips [1]	0%	0	0	0	0	0	0
	Passenger Trip	18%	5	3	8	13	13	26
	Transit Trips	55%	15	10	25	41	40	81
	Pedestrian trips	20%	5	4	9	15	14	29
	Cycling Trips	7%	2	1	3	5	5	10
Existing Retail + Passby	**External Person Trips**	**100%**	**-11**	**-7**	**-18**	**-29**	**-29**	**-58**
	Auto Driver	44%	0	0	0	0	0	0
	Auto Passenger	10%	-2	-1	-3	-5	-5	-10
	Transit	31%	-6	-4	-10	-16	-16	-32
	Walk	11%	-2	-1	-3	-6	-6	-12
	Cycle	4%	-1	-1	-2	-2	-2	-4
Net	**External Person Trips**	**100%**	**23**	**33**	**56**	**64**	**56**	**120**
	Auto Driver Trips	-	2	8	10	7	5	12
	Passenger Trip	-	3	3	6	9	8	17
	Transit Trips	-	12	16	28	33	30	63
	Pedestrian trips	-	5	5	10	11	9	20
	Cycling Trips	-	1	1	2	4	4	8

Note: 1 - The local mode split obtained from the 2016 TTS was used to proportionally re-distribute the auto driver split to the other modes.

The proposed development is predicted to generate a net total of 28 two-way transit trips (12 inbound and 16 outbound) during the weekday AM peak hour and 63 two-way transit trips (33 inbound and 30 outbound) during the weekday PM peak hour. Auto passenger, pedestrian, and cycling trips are expected to account for the remaining non-auto driver trips. Overall, the site trips are expected to be supported by the multi-modal transportation network surrounding the subject site.

3.2 TRIP DISTRIBUTION AND ASSIGNMENT

The trip distribution of site traffic was estimated using 2016 TTS data for the surrounding traffic analysis zones (TAZs 1, and 251-258). The trip distribution calculation was completed using the AM and PM peak hour data. Vehicle site trip assignment is based on the local road network, turn restrictions, logical routing, and type of access.

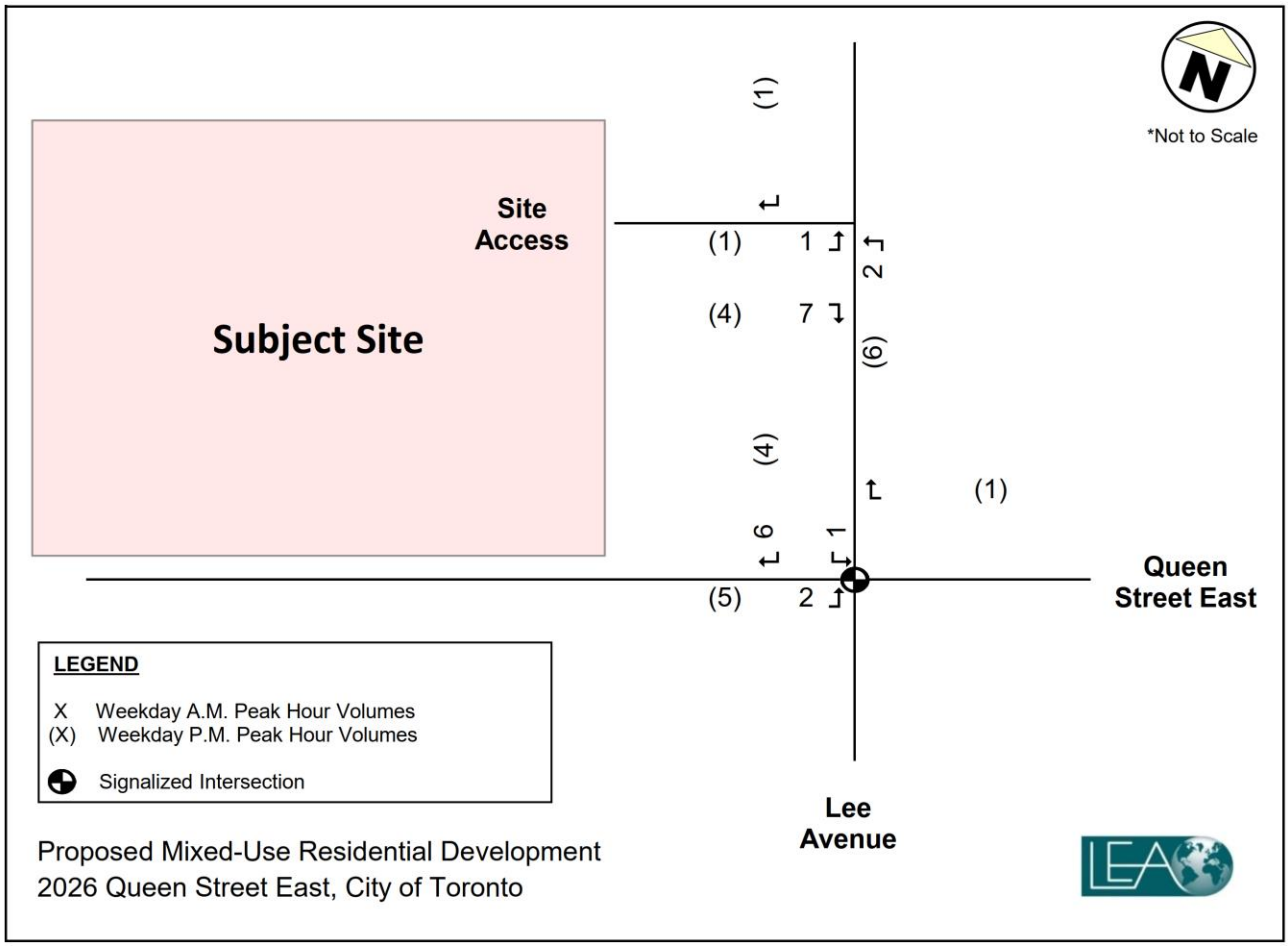
Table 3-4 below summarizes the subject site vehicle trip distribution. The details of the TTS data are provided in **Appendix B.**

Table 3-4: Subject Site Trip Distribution

Direction From/ To	Expected Route	Residential Weekday AM/PM	
		In	Out
North	Queen Street East	33%	32%
	Lee Avenue	11%	10%
East	Queen Street East	8%	7%
	Lee Avenue	7%	6%
West	Queen Street East	41%	45%
	Total	100%	100%

The site-generated traffic volumes for the weekday AM and PM peak hours are shown in **Figure 3-1**

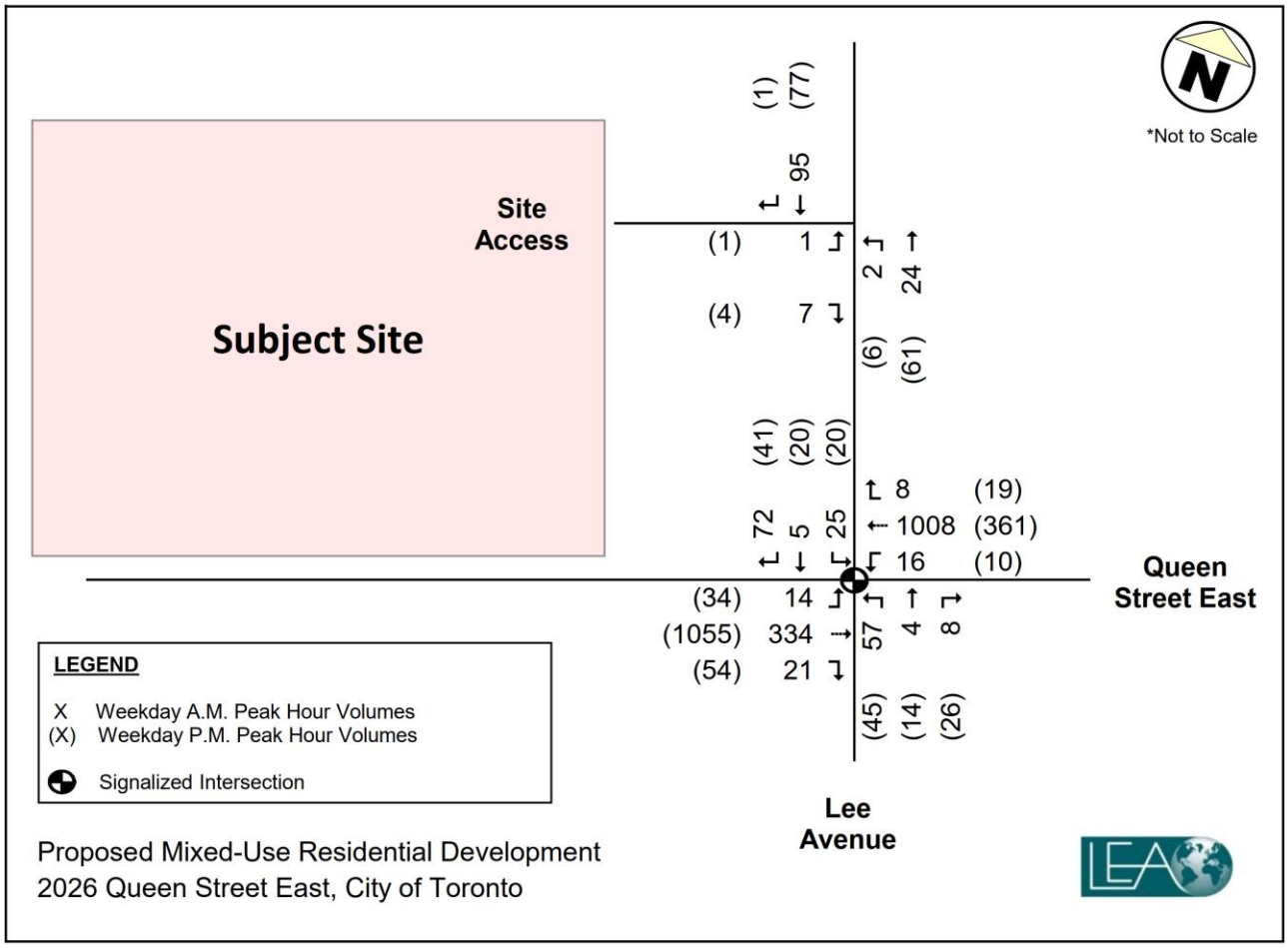
Figure 3-1: Site-Generated Peak Hour Traffic Volumes



3.3 FUTURE TOTAL TRAFFIC VOLUMES

The future total traffic volumes during the AM and PM peak hours are illustrated in **Figure 3-2**.

Figure 3-2: Future Total Peak Hour Traffic Volumes



4 INTERSECTION CAPACITY ANALYSIS RESULTS

The intersection capacity analysis was undertaken using Synchro version 11.0, which is based on the Highway Capacity Manual 2000 methodology. The Synchro network was modelled in accordance with the *City of Toronto's Guidelines for the Preparation of Transportation Impact Studies (July 2013).* Key movements of interest are defined as those 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.

As noted in **Section 2.5**, an intersection capacity analysis was undertaken for only the proposed site access following full build-out. This was completed to ensure the proposed site access could accommodate the projected site traffic volumes without resulting in significant traffic impacts to the adjacent intersection of Queen Street East and Lee Avenue.

4.1 UNSIGNALIZED INTERSECTION

The results of the intersection capacity analysis for the unsignalized site access are provided in **Table 4-1**. Detailed capacity results are provided in **Appendix C**.

Table 4-1: Site Access – Intersection Capacity Analysis

AM	Future Total Traffic				
Mvmt	Vol	V/C	Delay (s)	LOS	95th Queue
EBLR	9	0.01	9	A	0
NBLT	29	0.00	0	A	0
SBTR	106	0.06	0	-	0
PM	Future Total Traffic				
Mvmt	Vol	V/C	Delay (s)	LOS	95th Queue
EBLR	5	0.00	9	A	0
NBLT	70	0.00	0	A	0
SBTR	82	0.05	0	-	0

Under future total AM and PM peak hour conditions, all movements at the site access are expected to operate within capacity with LOS 'A' and V/C ratios well below 1.00. None of the site access movements are expected to experience delays or queuing constraints. Therefore, the proposed development can be accommodated within the existing road network with negligible traffic impact.

5 PARKING REVIEW

This section reviews the applicable bicycle and vehicle parking standards for the subject site as outlined by the City of Toronto Zoning By-law 569-2013.

5.1 BICYCLE PARKING

The City of Toronto Zoning By-law 569-2013 bicycle parking requirements were reviewed and applied to the proposed development, as summarized in **Table 5-1**. As per Section 230.5.10.1(3), bicycle parking is not required for the retail component of the proposed development as it has an interior floor area below 2,000m^2.

Table 5-1: Bicycle Parking Requirements

Land Use	Units	Type of Space	Parking Rate (Bicycle Zone 1)	Required Bicycle Parking Spaces	Proposed Supply
Residential	60	Short-Term	0.2 spaces/unit	12	12
		Long-Term	0.9 spaces/unit	54	56
			Total	**66**	**68**

Under By-law 569-2013, as amended by By-law 839-2022, the proposed development is required to provide a minimum of 66 bicycle parking spaces, consisting of 12 short-term spaces and 54 long-term spaces. The proposed bicycle parking supply is 68 spaces, consisting of 12 short-term spaces and 56 long-term spaces. The proposed parking supply therefore satisfies the By-law requirement, with an excess of 2 long-term spaces to further promote cycling to and from the site.

5.2 VEHICLE PARKING

In February 2022, City Council enacted Zoning By-law 89-2022, which amends By-law 569-2013 with respect to parking standards. By-law 89-2022 removes the majority of minimum parking requirements from By-law 569-2013 and sets updated maximum parking standards applicable for new developments citywide.

As per the By-law 89-2022 Parking Zone Overlay map, the subject site is located in Parking Zone B (PZB). The parking requirements and proposed supply are summarized in **Table 5-2**.

Table 5-2: Vehicular Parking Requirements

Land Use	Units/GFA	Minimum		Maximum		Proposed Supply
		Rate (PZB)	Spaces	Rate (PZB)	Spaces	
1-Bedroom	40 Units	N/A	0	0.8 spaces/unit	32	33
2-Bedroom	14 Units			0.9 spaces/unit	12	
3-Bedroom	6 Units			1.1 spaces/unit	6	
				Residential Sub-Total	**50**	
Visitor	60 Units	2.0+0.05 spaces/unit	5	1.0 spaces/unit for first 5 units, then 0.1 spaces/unit	10	0
Retail	1,140m^2	N/A	0	4.0 spaces/100m^2	45	
			Total	**5**	**-**	**105**	**33**

Under By-law 569-2013, as amended by By-law 89-2022, a minimum of 5 visitor parking spaces are required for the proposed development. The proposed development is deficient by 5 visitor parking spaces as no visitor parking will be provided on-site.

The proposed development's underground parking will be accessible via car elevator only and will accommodate verified residents who will have access to the controlled system. Parking will not be provided for visitor and non-residential uses due to safety and security reasons.

To accommodate the lack of visitor parking facilities on-site, a review of the public parking options within the vicinity of the site was conducted. The review indicated that there is nearby free public parking, limited to 1 hour between 8:00AM and 6:00PM, north of the site along Lee Avenue, which will accommodate visitors at most times, except for between 12:00AM and 7:00AM in which a parking permit is needed. Paid parking is also available on-street along Queen Street East and in a municipal parking lot at the southeast corner of the intersection of Peggy Delaney Way and Lee Avenue. The numerous nearby public parking options will accommodate the 5 visitor parking spaces required under By-law 569-2013, as amended by By-law 89-2022.

5.2.1 Accessible Parking Requirements

The accessible parking requirements and proposed supply under By-law 569-2013, as amended by By-law 89-2022, are shown in **Table 5-3.**

Table 5-3: Accessible Parking Requirements

Land Use	Unit Count/GFA	Zoning By-law 569-2013 (Parking Zone B)	
		Accessible Parking Rate	Effective Parking Spaces
1-Bedroom	40 Units	0.8 spaces/unit	32
2-Bedroom	14 Units	0.9 spaces/unit	12
3-Bedroom	6 Units	1.1 spaces/unit	6
		Residential Sub-Total	50
Visitor	60 Units	0.1 spaces/unit	6
Retail	1,140m^2	1.0 space/100m^2	11
		Total	67
Min. # Accessible Spaces		1 space per 25 effective spaces, or part thereof	3
		Proposed Accessible Parking Supply	2

Under By-law 569-2013, as amended by By-law 89-2022, the proposed development is required to provide a minimum of 3 accessible parking spaces. The proposed parking supply will include 2 accessible parking spaces, which is deficient by 1 space.

The proposed supply of 2 accessible parking spaces is appropriate given that the total number of vehicular parking spaces provided (33) is significantly less than the number of effective spaces (67). According to the previous Zoning By-law 569-2013 accessible parking rates, as amended by By-law 569-2017, the number of accessible parking spaces is determined based on the number of required parking spaces rather than the number of effective parking spaces, as shown in Section 200.15.15.4(3). Based on the previous Zoning By-law 569-2013 rates, the proposed development exceeds the accessible parking requirement by one (1) accessible parking space, as shown in **Table 5-4**.

Table 5-4: Accessible Parking Requirements Using Previous ZBL 569-2013 Rates

Land Use	Units/GFA	Zoning By-law 569-2013 Minimum Requirements		Proposed Supply
		Rate (PZB)	Parking Spaces	
1-Bedroom	40 Units	n/a	0	2
2-Bedroom	14 Units			
3-Bedroom	6 Units			
Visitor	60 Units	2.0+0.05 spaces/unit	5	
Retail	1,140m^2	N/A	0	
Total			**5**	
Min. # of Accessible Spaces			1 space if the number of required parking spaces is 5 to 24	
Total Required # of Accessible Spaces			**1**	

6 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is a set of strategies that strive towards a more efficient transportation network by influencing travel behaviour. Effective TDM measures can reduce vehicle usage and encourage people to engage in more sustainable methods of travel. In addition to the active transportation and transit routes in the area, which are discussed in detail under **Section 2**, there are several opportunities to incorporate TDM measures that support alternative modes of transportation. The recommendations should enhance non-single occupant vehicle trips for the future residents of the proposed development. To reduce single occupancy vehicle (SOV) trips generated, a variety of multimodal infrastructure strategies and TDM measures have been detailed below.

6.1 PEDESTRIAN-BASED STRATEGIES

SIDEWALK CONNECTIVITY TO QUEEN STREET EAST

The proposed development's main entrances are oriented towards the existing sidewalk on Queen Street East. The connectivity between the site and nearby public sidewalks will make it convenient, comfortable, and safe for pedestrians and transit users to access the building.

MIXED LAND USES

The provision of on-site residential and retail uses will help internalize site travel demand and provide several on-site destinations that encourage walking trips. The proposed development is located in a mixed-use area with nearby amenities, as indicated in **Section 2**. The site's surrounding pedestrian infrastructure and proximity to grocery stores, pharmacies, eating establishments, parks, and a library will encourage walking trips in place of auto trips.

Estimated Impact: It is estimated that the pedestrian-based strategies will result in a SOV reduction of 2-4% based on the site's safe and convenient pedestrian network which encourages people to walk to and from the site in place of driving.

6.2 CYCLING-BASED STRATEGIES

PROVISION OF BICYCLE PARKING SPACES

The subject site will provide bicycle parking spaces to support and encourage active transportation. Short-term bicycle parking spaces will be provided at-grade, along the driveway at the north side of the site which is accessible via Lee Avenue. Long-term bicycle parking spaces will be provided in a secure bicycle storage area at the P1 level. Additionally, the proposed supply exceeds the By-law requirements by 2 long-term spaces as indicated in **Section 5.1**. The provision of bicycle parking spaces will promote cycling to and from the site while also reducing the demand for single occupancy vehicles.

CYCLING INFORMATION PACKAGES

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

BIKE SHARE MEMBERSHIP

As mentioned in **Section 2**, a Bike Share docking station is located at 85 Lee Avenue, which is within 60 m or a one-minute walk of the subject site. It is recommended that an annual Bike Share membership be provided

to each unit upon occupancy. The provision of annual Bike Share memberships will encourage residents to use Bike Share services to and from the site instead of driving.

ON-SITE BICYCLE REPAIR STATION

A significant barrier for some people considering cycling as their day-to-day mode of travel is cycling repair and maintenance. As such, it is recommended that a bicycle repair station be provided on-site to alleviate the stress of cycling technical issues and promote cycling as a convenient travel option for residents.

Estimated Impact: Given that the site is expected to have a vehicle trip generation of 10 trips during the AM peak hour and 12 trips during the PM peak hour, it is estimated that a SOV reduction of 16-20% will occur if 2 people replaced their daily driving commute with cycling via the additional two long-term bicycle parking spaces on-site and/or the nearby Bike Share vehicles.

6.3 TRANSIT-BASED STRATEGIES

CONNECTION TO TRANSIT NETWORK

The subject site is located in an area well-serviced by the Toronto Transit Commission (TTC) network. There are a number of existing TTC surface transit routes within the study area, including the east-west streetcar Route 501 along Queen Street East and the north-south bus Route 64 along Wineva Avenue and Main Street. Further, subway service is available via Main Station, which is located within an 11-minute connecting bus ride, and Woodbine Station, which is located within a 14-minute connecting bus ride, from the subject site. The Danforth GO Train Station on the Lakeshore East GO train line is also within a 15-minute connecting bus ride. The availability of transit services will encourage future residents, visitors and employees of the site to use public transit.

TRANSIT INFORMATION PACKAGES

For residents to take complete advantage of the transit services surrounding the subject site, it is recommended that information packages be distributed to increase transit awareness and multi-modal transport. The information packages should contain public transit information such as route maps and timetables.

DIGITAL DISPLAY FOR TRANSIT INFORMATION

It is recommended for a digital display to be located in the lobby of the building with up-to-date information regarding transit schedules, adjacent transit stops, and service disruptions. The addition of digital displays showing transit information will help residents gain a better understanding of what transit routes are available and when departure times are so that they can easily plan their trip.

Estimated Impact: Given that the site is expected to have a vehicle trip generation of 10 trips during the AM peak hour and 12 trips during the PM peak hour, it is estimated that a SOV reduction of 8-10% will occur if 1 person replaced their daily driving commute with public transit usage instead. The site's proximity to existing transit routes, transit information packages, and display of transit information will encourage transit usage to and from the site.

6.4 PARKING MANAGEMENT & TRAVEL-BASED STRATEGIES

UNBUNDLED PARKING

It is recommended that the proposed development lease parking spaces separately from the cost to rent/own a unit. This will encourage other sustainable modes of transportation and reduce auto-dependency by discouraging vehicle ownership as occupants recognize the costs of keeping a parking space.

Estimated Impact: It is estimated that the parking management and travel-based strategy will result in a SOV reduction of 2-4% since it discourages vehicle ownership and encourages alternative modes of transportation in place of SOV trips, including walking, cycling, transit, and rideshare trips.

6.5 TDM CHECKLIST

The recommended TDM strategies have been summarized along with their impacts in **Table 6-1**

Table 6-1: TDM Impacts and SOV Reduction

Item	Impact	Unit Costs	Total Costs	SOV Reduction
Pedestrian-Based Strategies				
Sidewalk Connectivity to Queen Street East	+ Sidewalk connectivity will provide convenient linkages for pedestrians and transit users to access the building.	N/A		2-4%
Mixed Land Uses	+ Amenities located on-site and in nearby off-site locations will encourage walking trips.	N/A		
Cycling-Based Strategies				
Provision of Bicycle Parking Spaces	+ Convenient short-term and secure long-term bicycle parking will encourage cycling as a mode of transportation.	Included in Site Plan		16-20%
Cycling Information Packages	+ Improves knowledge of cycling routes and encourages cycling usage.	TBD		
Provision of Bike Share Memberships	+ Provision of annual Bike Share memberships will encourage residents to use Bike Share services to and from the site instead of driving.	$105/year for Annual 30	$6,300 (60 Units)	
On-Site Bicycle Repair Station	+ Provides on-site cycling repair and maintenance tools for residents. + Alleviates the stress of technical issues and promotes cycling as a convenient travel option.	$1000-$2,500	$1000-$2,500 (1 repair station)	
Transit-Based Strategies				
Connection to Transit Network	+ Site's proximity to nearby transit routes will encourage transit usage.	N/A		8-10%
Transit Information Packages	+ Improves knowledge of transit routes and encourages transit usage.	TBD		
Digital Display for Transit Information	+ Help residents gain a better understanding of what transit routes are available and when departure times are so that they can easily plan their trip.	TBD		
Parking Management & Travel-Based Strategies				
Unbundled Parking	+ Encourages sustainable modes of transportation and reduces auto-dependency by discouraging vehicle ownership, as occupants recognize the costs of keeping a parking space.	Included in Site Plan		2-4%
			Total	**28-38%**

The TDM measures outlined above are expected to cumulatively achieve a 36-48% reduction in the number of SOV trips generated by the proposed development, satisfying the Toronto Green Standards (TGS) V4 criteria.

7 TORONTO GREEN STANDARDS REVIEW

The subject site is required to meet the Tier 1 Performance Measures listed under the Toronto Green Standards Version 4 (TGS V4) for Mid to High-Rise Residential & Non-Residential developments.

7.1 LOW EMISSIONS TRANSPORTATION

7.1.1 Single-Occupant Vehicle Trips

Section AQ 1.1 of TGS V4 requires developments to reduce single occupancy auto vehicle trips generated by the proposed development by 25% through a variety of multimodal infrastructure strategies and Transportation Demand Management (TDM) measures. The proposed TDM Plan satisfies the TGS requirement of a 25% SOV reduction, as shown in **Section 7**.

7.1.2 Electrical Vehicle Infrastructure

Section AQ 1.2 of TGS V4 requires developments to provide parking spaces equipped with an energized outlet in accordance with Zoning By-law 89-2022. The By-law specifies that all residential parking spaces must include an energized outlet. All residential parking spaces will be equipped with an energized outlet, satisfying this requirement.

7.2 CYCLING INFRASTRUCTURE

7.2.1 Bicycle Parking Rates

Section AQ 2.1 of TGS V4 requires developments to provide bicycle parking spaces in accordance with Zoning By-law 569-2013. As discussed in **Section 5.1**, the proposed bicycle parking supply satisfies and exceeds the By-law requirements by 2 long-term parking spaces.

7.2.2 Long-Term Bicycle Parking Location

Section AQ 2.2 of TGS V4 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. The proposed development locates all long-term bicycle parking spaces in a secure bicycle storage area at the P1 level, satisfying this requirement.

7.2.3 Short-Term Bicycle Parking Location

Section AQ 2.3 of the TGS V4 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. The proposed development locates all short-term bicycle parking in an accessible location at-grade, satisfying this requirement.

7.2.4 Electric Bicycle Infrastructure

Section AQ 2.4 of the TGS V4 requires developments to provide bicycle parking spaces equipped with an energized outlet for at least 15% of the required residential long-term bicycle parking spaces. 15% of the long-term bicycle parking spaces will be equipped with an energized outlet, satisfying this requirement.

7.3 PEDESTRIAN INFRASTRUCTURE

7.3.1 Connectivity

Section AQ 3.1 of the TGS V4 requires developments to provide safe, direct, and universally accessible pedestrian routes that connect the buildings on-site to the off-site pedestrian network and priority destinations. The proposed development meets this requirement as the principal entrances connect to the existing sidewalk network along Queen Street East.

7.3.2 Sidewalk Space

Section AQ 3.2 requires developments to provide a context-sensitive pedestrian clearway that is a minimum of 2.1 m wide to accommodate pedestrian flow safely and comfortably. The existing pedestrian clearway along Queen Street East meets this requirement.

7.3.3 Weather Protection

Section AQ 3.3 of the TGS V4 requires developments to provide covered outdoor waiting areas for pedestrian comfort and protection from inclement weather. The proposed development has covered waiting areas by the entrances, satisfying this requirement.

7.3.4 Pedestrian Lighting

Section AQ 3.4 of the TGS V4 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 proposed development will satisfy this requirement through the existing streetlights located along Queen Street East and Lee Avenue.

8 LOADING & FUNCTIONAL DESIGN REVIEW

The loading requirements for the subject site were reviewed based on City of Toronto By-law 569-2013. The minimum loading requirements are noted below in **Table 8-1.**

Table 8-1: Loading Requirements

Land Use	City of Toronto ZBL 569-2013				
	Units/GFA	A	B	C	G
Residential	31-399 Units	-	-	-	1
Retail	500 m^2 -1,999 m^2	-	1	-	-
Total		0	1	0	1
Proposed Loading Supply		0	1	1	0

Under By-law 569-2013, the proposed development is required to provide a minimum of one (1) Type B and one (1) Type G loading space. The proposed loading supply will include one (1) Type B and one (1) Type C loading space.

Internal loading activities will include deliveries, moving and commercial garbage while residential garbage will be picked up on Lee Avenue.

The site plan provides safety recommendations for internal loading within the subject site, such as post mounted light warning systems, convex mirrors, and minimum sidewalk widths of 2.1 metres. The internal loading supply will serve two-way vehicle movements within the site. As such, the subject site provides safe vehicle and pedestrian movement with adequate loading facilities for future uses.

A functional design review demonstrating vehicular and loading functionality is provided in **Appendix D**.

9 CONCLUSIONS

- The proposed mixed-use development will replace the existing two-storey building with retail stores at-grade, including restaurants and a grocery store, and a yoga studio on the 2nd storey, with a mixed-use building containing 60 residential units and 1,140 m^2 of commercial GFA. A total of 33 parking spaces are proposed within one level of underground parking, with an unsignalized full-movement vehicle access provided off Lee Avenue.
- The site is located in an area well-serviced by transit, cycling facilities, and pedestrian infrastructure. There are a number of existing TTC surface transit routes within the study area, including the east-west streetcar Route 501 along Queen Street East and the north-south bus Route 64 along Wineva Avenue and Main Street. The site is located nearby on-street shared cycling connections along Lee Avenue with connections to major multi-use trails, cycle tracks along Woodbine Avenue, and bike lanes along Dundas Street East. A City of Toronto Bike Share docking station is also located within 60 m of the site. There are sidewalks along both sides of Queen Street East, Lee Avenue and Wheeler Avenue, and amenities such as grocery stores, pharmacies, eating establishments, parks and a library within walking distance of the site.
- The proposed development is predicted to generate 10 two-way auto trips (2 inbound and 8 outbound) during the weekday AM peak hour and 12 two-way auto trips (7 inbound and 5 outbound) during the weekday PM peak hour.
- The proposed retail use is predicted to generate 45 two-way person trips (27 inbound and 18 outbound) during the weekday AM peak hour and 146 two-way person trips (74 inbound and 72 outbound) during the weekday PM peak hour. Compared to existing conditions, the proposed development's retail use has an increase of 27 and 88 person trips in the AM and PM peak hours, respectively.
- The proposed development is predicted to generate a net total of 28 two-way transit trips (12 inbound and 16 outbound) during the weekday AM peak hour and 63 two-way transit trips (33 inbound and 30 outbound) during the weekday PM peak hour. Auto passenger, pedestrian, and cycling trips are expected to account for the remaining non-auto driver trips.
- An intersection capacity analysis was undertaken for the proposed site access following full build-out to ensure the proposed site access can accommodate the projected site traffic volumes without resulting in significant traffic impacts to the adjacent intersections. All movements at the site access are expected to operate within capacity with a LOS of 'A' and V/C ratios below 1.00. None of the site access movements are expected to experience delays or queuing constraints. Therefore, the proposed development can be accommodated within the existing road network with negligible traffic impact.
- Under By-law 569-2013, as amended by By-law 839-2022, the proposed development is required to provide a minimum of 66 bicycle parking spaces, consisting of 12 short-term spaces and 54 long-term spaces. The proposed supply meets the short-term requirements and exceeds the long-term requirements by 2 spaces.
- Under By-law 569-2013, as amended by By-law 89-2022, a minimum of 5 visitor parking spaces are required for the proposed development. The proposed development is deficient by 5 visitor parking spaces as no visitor parking will be provided on-site. Parking will not be provided for visitors and non-residential uses due to safety and security reasons as the proposed development's underground parking will be accessible via car elevator only. However, there are many on-street and off-street parking locations near the subject site to accommodate the visitor parking demand.

- Under By-law 569-2013, as amended by By-law 89-2022, the proposed development is required to provide a minimum of 3 accessible parking spaces. The proposed parking supply will include 2 accessible parking spaces, which is deficient by 1 space. An accessible parking justification has been provided to indicate how the accessible parking provision is acceptable for the site.
- The proposed development meets all the Tier 1 Performance Measures in the Toronto Green Standards Version 4 (TGS V4) where applicable.
- Several Transportation Demand Management measures have been proposed to reduce automobile usage and encourage people to engage in more sustainable transportation modes. Initiatives in the TDM plan include pedestrian, cycling, transit, and parking management & travel-based strategies.
- Under By-law 569-2013, the proposed development is required to provide a minimum of one (1) Type B and one (1) Type G loading space. The proposed loading supply will include one (1) Type B and one (1) Type C loading space. Although a Type G space will not be provided, the Type B loading space will maintain the required 6.1 m vertical clearance to accommodate waste collection on-site.

APPENDIX A

Existing Traffic Data & Signal Timing Plans

			Interval Time		Cars												Trucks											
			Start	End	SB			NB			WB			EB			SB			NB			WB			EB		
count_date	location_id	Location			R	T	L	R	T	L	R	T	L	R	T	L	R	T	L	R	T	L	R	T	L	R	T	L
			time_start	time_end	sb_cars_r	sb_cars_t	sb_cars_l	nb_cars_r	nb_cars_t	nb_cars_l	wb_cars_r	wb_cars_t	wb_cars_l	eb_cars_r	eb_cars_t	eb_cars_l	sb_truck_r	sb_truck_t	sb_truck_l	nb_truck_r	nb_truck_t	nb_truck_l	wb_truck_r	wb_truck_t	wb_truck_l	eb_truck_r	eb_truck_t	eb_truck_l
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 07:30:00-05:00	2019-03-05 07:45:00-05:00	11	1	2	1	0	12	2	213	4	2	62	5	1	0	0	0	0	2	0	0	1	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 07:45:00-05:00	2019-03-05 08:00:00-05:00	23	1	3	3	2	15	1	277	2	6	49	3	1	0	0	0	0	3	0	0	2	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 08:00:00-05:00	2019-03-05 08:15:00-05:00	13	2	4	0	0	17	0	259	6	6	69	3	1	0	1	0	0	0	0	1	0	0	2	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 08:15:00-05:00	2019-03-05 08:30:00-05:00	17	1	6	2	0	16	3	215	4	2	89	1	1	0	0	0	0	0	0	1	0	0	2	2
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 08:30:00-05:00	2019-03-05 08:45:00-05:00	10	1	9	3	2	9	3	206	4	7	95	6	0	0	1	0	0	1	3	0	0	3	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 08:45:00-05:00	2019-03-05 09:00:00-05:00	12	1	8	3	0	14	2	167	2	5	74	4	1	0	0	1	0	1	0	2	0	0	4	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 09:00:00-05:00	2019-03-05 09:15:00-05:00	15	0	2	1	0	13	2	139	2	5	81	1	0	0	0	0	0	0	4	1	0	0	0	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 09:15:00-05:00	2019-03-05 09:30:00-05:00	4	2	1	2	0	9	1	127	1	9	96	3	1	0	0	0	0	0	0	2	0	0	2	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 10:00:00-05:00	2019-03-05 10:15:00-05:00	6	1	2	1	2	4	4	105	0	2	72	2	1	0	0	0	0	0	0	3	0	0	1	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 10:15:00-05:00	2019-03-05 10:30:00-05:00	9	0	5	4	1	7	2	121	2	7	70	2	0	0	0	0	0	0	0	5	0	0	3	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 10:30:00-05:00	2019-03-05 10:45:00-05:00	9	3	3	4	1	7	7	89	6	5	93	5	1	0	0	0	0	1	2	0	0	1	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 10:45:00-05:00	2019-03-05 11:00:00-05:00	8	3	5	1	1	6	2	75	2	3	62	6	0	0	1	1	0	0	0	4	0	0	1	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 11:00:00-05:00	2019-03-05 11:15:00-05:00	4	2	3	1	0	9	2	77	1	6	78	3	1	0	0	0	0	1	0	1	3	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 11:15:00-05:00	2019-03-05 11:30:00-05:00	9	3	1	8	0	5	3	95	5	8	88	2	0	0	0	0	0	1	0	0	1	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 11:30:00-05:00	2019-03-05 11:45:00-05:00	6	1	9	3	1	9	6	100	6	4	83	5	0	0	0	0	0	1	0	1	0	0	2	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 11:45:00-05:00	2019-03-05 12:00:00-05:00	6	1	6	7	1	19	2	88	2	5	92	3	1	0	0	0	0	1	0	0	2	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 12:00:00-05:00	2019-03-05 12:15:00-05:00	5	1	7	3	2	9	2	89	2	6	114	2	0	0	1	0	0	3	0	0	1	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 13:00:00-05:00	2019-03-05 13:15:00-05:00	12	1	5	3	2	11	2	86	4	7	103	3	1	0	0	0	0	4	0	0	4	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 13:15:00-05:00	2019-03-05 13:30:00-05:00	9	2	5	4	1	10	6	83	3	10	121	4	1	0	0	0	1	3	0	0	2	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 13:30:00-05:00	2019-03-05 13:45:00-05:00	8	3	1	3	1	14	3	78	3	9	111	4	0	0	0	1	0	3	0	0	3	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 13:45:00-05:00	2019-03-05 14:00:00-05:00	15	1	1	2	0	5	1	78	0	3	103	3	0	0	0	0	1	2	0	0	1	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 14:00:00-05:00	2019-03-05 14:15:00-05:00	8	3	1	3	2	7	3	89	0	4	99	3	0	0	0	0	0	4	0	0	1	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 14:15:00-05:00	2019-03-05 14:30:00-05:00	8	3	1	3	2	7	3	89	0	4	99	3	0	0	0	0	0	4	0	0	1	1
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 14:30:00-05:00	2019-03-05 14:45:00-05:00	13	1	1	2	2	11	2	82	4	5	137	6	1	0	1	0	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 14:45:00-05:00	2019-03-05 15:00:00-05:00	11	3	4	3	1	7	2	75	2	6	160	3	1	0	0	0	0	5	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 15:00:00-05:00	2019-03-05 15:15:00-05:00	9	1	8	5	0	10	4	98	5	15	235	3	1	0	0	0	0	2	0	1	2	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 15:15:00-05:00	2019-03-05 15:30:00-05:00	9	6	4	2	2	13	1	80	3	12	252	5	0	1	0	0	0	2	1	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 15:30:00-05:00	2019-03-05 15:45:00-05:00	4	6	3	2	3	12	1	76	2	12	232	6	0	0	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 15:45:00-05:00	2019-03-05 16:00:00-05:00	13	7	5	3	2	14	3	89	2	10	295	8	0	0	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 16:00:00-05:00	2019-03-05 16:15:00-05:00	8	2	5	6	9	15	8	74	1	15	212	4	0	0	0	0	0	2	0	0	2	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 16:15:00-05:00	2019-03-05 16:30:00-05:00	8	2	5	6	2	10	7	95	4	10	247	7	0	0	0	0	0	1	0	0	2	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 16:30:00-05:00	2019-03-05 16:45:00-05:00	10	8	4	10	1	12	0	82	3	11	278	10	0	0	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 16:45:00-05:00	2019-03-05 17:00:00-05:00	11	8	6	4	2	8	3	84	2	18	273	8	0	0	0	0	0	0	0	0	0	0

			Interval Time		Buses												Pedestrians				Bicycles Crossings				Non-vehicle modes			
			Start	End	SB			NB			WB			EB														
count_date	location_id	Location			R	T	L	R	T	L	R	T	L	R	T	L	North Side	South Side	East Side	West Side	North Side	South Side	East Side	West Side	North Side	South Side	East Side	West Side
			time_start	time_end	sb_bus_r	sb_bus_t	sb_bus_l	nb_bus_r	nb_bus_t	nb_bus_l	wb_bus_r	wb_bus_t	wb_bus_l	eb_bus_r	eb_bus_t	eb_bus_l	nx_peds	sx_peds	ex_peds	wx_peds	nx_bike	sx_bike	ex_bike	wx_bike	nx_other	sx_other	ex_other	wx_other
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 07:30:00-05:00	2019-03-05 07:45:00-05:00	0	0	0	0	0	0	0	5	0	0	4	0	14	3	4	0	1	0	1	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 07:45:00-05:00	2019-03-05 08:00:00-05:00	0	0	0	0	0	0	0	4	0	0	2	0	37	7	2	13	0	1	0	2	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 08:00:00-05:00	2019-03-05 08:15:00-05:00	0	0	0	0	0	0	0	5	0	0	6	0	12	10	9	6	0	0	1	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 08:15:00-05:00	2019-03-05 08:30:00-05:00	0	0	1	0	0	0	0	5	0	0	4	0	27	4	7	8	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 08:30:00-05:00	2019-03-05 08:45:00-05:00	0	0	0	0	0	0	0	4	0	0	3	0	33	10	14	9	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 08:45:00-05:00	2019-03-05 09:00:00-05:00	0	0	0	0	0	0	0	3	0	0	4	0	42	22	15	10	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 09:00:00-05:00	2019-03-05 09:15:00-05:00	0	0	0	0	0	0	0	5	0	0	3	0	38	11	10	14	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 09:15:00-05:00	2019-03-05 09:30:00-05:00	0	0	0	0	0	0	0	4	0	0	5	0	41	14	16	13	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 10:00:00-05:00	2019-03-05 10:15:00-05:00	0	0	0	0	0	0	0	2	0	0	0	0	51	19	16	12	0	0	1	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 10:15:00-05:00	2019-03-05 10:30:00-05:00	0	0	0	0	0	0	0	0	0	0	7	0	64	22	15	19	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 10:30:00-05:00	2019-03-05 10:45:00-05:00	0	0	0	0	0	0	0	5	0	0	1	0	58	14	8	11	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 10:45:00-05:00	2019-03-05 11:00:00-05:00	0	0	0	0	0	0	0	3	0	0	1	0	67	14	19	9	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 11:00:00-05:00	2019-03-05 11:15:00-05:00	0	0	0	0	0	0	0	2	0	0	6	0	46	21	17	14	0	0	1	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 11:15:00-05:00	2019-03-05 11:30:00-05:00	0	0	0	0	0	0	0	3	0	0	1	0	58	36	16	19	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 11:30:00-05:00	2019-03-05 11:45:00-05:00	0	0	0	0	0	0	0	2	0	0	2	0	75	34	22	26	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 11:45:00-05:00	2019-03-05 12:00:00-05:00	0	0	0	0	0	0	0	2	0	0	3	0	84	45	27	22	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 13:00:00-05:00	2019-03-05 13:15:00-05:00	0	0	0	0	0	0	0	1	0	0	4	0	60	60	15	24	0	0	1	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 13:15:00-05:00	2019-03-05 13:30:00-05:00	0	0	0	0	0	0	0	7	0	0	2	0	57	35	21	23	0	0	1	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 13:30:00-05:00	2019-03-05 13:45:00-05:00	0	0	0	0	0	0	0	3	0	0	6	0	67	72	22	24	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 13:45:00-05:00	2019-03-05 14:00:00-05:00	0	0	0	0	0	0	0	4	0	0	3	0	63	17	18	12	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 14:00:00-05:00	2019-03-05 14:15:00-05:00	0	0	0	0	0	0	0	3	0	0	1	0	46	42	17	22	0	0	1	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 14:15:00-05:00	2019-03-05 14:30:00-05:00	0	0	0	0	0	0	0	2	0	0	5	0	84	29	23	12	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 14:30:00-05:00	2019-03-05 14:45:00-05:00	0	0	0	0	0	0	0	3	0	0	2	0	52	31	15	19	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 14:45:00-05:00	2019-03-05 15:00:00-05:00	0	0	0	0	0	0	0	3	0	0	2	0	53	24	16	16	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 15:00:00-05:00	2019-03-05 15:15:00-05:00	0	0	0	0	0	0	0	3	0	0	2	0	74	25	31	25	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 15:15:00-05:00	2019-03-05 15:30:00-05:00	0	0	0	0	0	0	0	3	0	0	3	0	82	46	25	31	1	0	1	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 15:30:00-05:00	2019-03-05 15:45:00-05:00	0	0	0	0	0	0	0	3	0	0	5	0	67	41	24	29	0	0	0	1	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 15:45:00-05:00	2019-03-05 16:00:00-05:00	0	0	0	0	0	0	0	4	0	0	2	0	79	44	42	13	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 16:00:00-05:00	2019-03-05 16:15:00-05:00	0	0	0	0	0	0	0	3	0	0	4	0	90	34	35	27	0	0	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 16:15:00-05:00	2019-03-05 16:30:00-05:00	0	0	0	0	0	0	0	4	0	0	4	0	81	43	27	35	0	0	0	2	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 16:30:00-05:00	2019-03-05 16:45:00-05:00	0	0	0	0	0	0	0	3	0	0	5	0	69	32	20	32	0	1	0	0	0	0	0	0
2019-03-05	4759	LEE AVE AT QUEEN ST E (PX 549)	2019-03-05 16:45:00-05:00	2019-03-05 17:00:00-05:00	0	0	0	0	0	0	0	3	0	0	2	0	66	37	24	18	0	1	0	0	0	0	0	0

APPENDIX B

Trip Generation and TTS Calculations

Mode Split for Residential Trips

Fri Nov 11 2022 11:44:28 GMT-0500 (Eastern Standard Time) - Run Time: 2647ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Type of dwelling unit - dwell_type
Column: Primary travel mode of trip - mode_prime

Filters:
(2006 GTA zone of household - gta06_hhld In 1,251-258
and
Trip purpose - trip_purp In 1,2

Trip 2016
Table:

	Transit excluding GO rail	Cycle	Auto driver	GO rail only	Joint GO rail and local transit	Motorcycle	Auto passenger	School bus	Taxi passenger	Paid rideshare	Walk
House	10698	2053	10107	483	36	71	1285	189	102	228	3503
Apartment	9644	673	5242	140	113	128	476	209	92	228	1127
Townhouse	1094	79	1159	61	0	29	260	0	0	26	312
SUM	21436	2805	16508	684	149	228	2021	398	194	482	4942
										GRAND SUM	49847

Mode	%
Auto Driver	35%
Passenger	5%
Transit	44%
Pedestrian	10%
Cycling	6%
Total	100%

Mode Split for Retail Trips

Fri Nov 11 2022 11:46:03 GMT-0500 (Eastern Standard Time) - Run Time: 2864ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Type of dwelling unit - dwell_type
Column: Primary travel mode of trip - mode_prime

Filters:
(2006 GTA zone of household - gta06_hhld In 1, 251-258
and
Trip purpose - trip_purp In 1,2,3

Trip 2016
Table:

	Transit excluding GO rail	Cycle	Auto driver	GO rail only	Joint GO rail and local transit	Motorcycle	Other	Auto passenger	School bus	Taxi passenger	Paid rideshare	Walk
House	13156	2901	26841	483	78	101	0	5335	189	374	451	6632
Apartment	14485	1118	10842	140	113	145	65	1419	209	396	352	3238
Townhouse	1287	309	2993	84	0	58	0	862	0	0	42	453
SUM	28928	4328	40676	707	191	304	65	7616	398	770	845	10323
											GRAND SUM	95086

Mode	%
Auto Driver	44%
Passenger	10%
Transit	31%
Pedestrian	11%
Cycling	4%
Total	100%

Fri Nov 11 2022 15:58:19 GMT-0500 (Eastern Standard Time) - Run Time: 2884ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(2006 GTA zone of destination - gta06_dest In 1, 251-258
and
Start time of trip - start_time In 1500-1900
and
Trip purpose of destination - purp_dest In H
and
Primary travel mode of trip - mode_prime In D, M

Trip 2016
Table:

Origin	Destination									Trips from Origi	Trip Distribution		Trip Assignment			
	1	251	252	253	254	255	256	257	258		Distribution	Direction From	From East	From West	From North	From South
PD 1 of Toronto	183	154	269	316	232	468	193	536	145	2496	22%	W		22%		
PD 2 of Toronto	7	0	10	28	0	38	33	0	12	128	1%	W		1%		
PD 3 of Toronto	0	103	0	29	8	73	0	27	0	240	2%	W		2%		
PD 4 of Toronto	69	8	189	80	109	67	90	74	29	715	6%	W		6%		
PD 5 of Toronto	36	89	19	133	0	52	22	73	30	454	4%	N			4%	
PD 6 of Toronto	146	192	444	446	229	555	217	648	307	3184	28%	N			28%	
PD 7 of Toronto	0	0	0	0	0	0	60	64	0	124	1%	W		1%		
PD 8 of Toronto	0	0	63	0	0	8	15	0	0	86	1%	W		1%		
PD 9 of Toronto	0	27	0	8	0	0	117	15	39	206	2%	W		2%		
PD 10 of Toronto	0	44	12	7	5	12	0	9	51	140	1%	W		1%		
PD 11 of Toronto	18	0	21	15	50	28	15	12	19	178	2%	N			2%	
PD 12 of Toronto	9	28	11	6	51	0	0	0	79	184	2%	N			2%	
PD 13 of Toronto	38	88	51	136	33	82	86	82	6	602	5%	E	5%			
PD 14 of Toronto	9	38	74	115	29	114	49	21	24	473	4%	E	4%			
PD 15 of Toronto	0	0	0	0	48	34	0	12	55	149	1%	E	1%			
PD 16 of Toronto	11	86	22	8	78	30	0	0	48	283	3%	E	3%			
Pickering	0	0	17	8	0	0	0	0	0	25	0%	E	0%			
Ajax	0	0	0	0	0	0	0	29	0	29	0%	E	0%			
Whitby	0	0	0	0	0	0	14	0	0	14	0%	E	0%			
Oshawa	0	0	0	0	50	10	0	9	0	69	1%	E	1%			
Newmarket	0	0	0	8	0	0	0	0	0	8	0%	N			0%	
Richmond Hill	15	0	41	0	0	93	35	0	0	184	2%	N			2%	
Whitchurch-Stouffville	0	18	40	0	0	0	0	0	0	58	1%	N			1%	
Markham	0	75	13	57	0	97	0	76	53	371	3%	N			3%	
Vaughan	10	10	0	135	42	0	40	12	16	265	2%	N			2%	
Brampton	0	8	30	0	0	24	0	12	14	88	1%	W		1%		
Mississauga	17	0	71	25	0	87	18	53	27	298	3%	W		3%		
Oakville	0	0	0	0	15	0	13	0	0	28	0%	W		0%		
Hamilton	0	10	0	41	0	0	0	0	0	51	0%	W		0%		
Thorold	0	0	51	0	0	0	0	0	0	51	0%	S				0%
Cambridge	0	0	0	0	0	0	0	12	0	12	0%	W		0%		
Orangeville	0	0	0	17	0	0	0	0	0	17	0%	W		0%		
Muskoka	0	0	0	0	0	0	0	21	0	21	0%	N			N	
										11231	100%	TOTAL	15%	41%	44%	0%

50% from Lee

25% from Lee

Fri Nov 11 2022 16:03:02 GMT-0500 (Eastern Standard Time) - Run Time: 2588ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(2006 GTA zone of origin - gta06_orig In 1, 251-258
and
Start time of trip - start_time In 600-1000
and
Trip purpose of origin - purp_orig In H
and
Primary travel mode of trip - mode_prime In D, M

Trip 2016
Table:

Destination	Origin									Trips to	Trip Distribution		Trip Assignment			
	1	251	252	253	254	255	256	257	258	Destination	Distribution	Direction To	To East	To West	To North	To South
PD 1 of Toronto	226	187	265	496	369	492	291	332	147	2805	25%	W		25%		
PD 2 of Toronto	7	8	10	15	0	53	33	0	0	126	1%	W		1%		
PD 3 of Toronto	0	34	0	0	17	0	0	12	0	63	1%	W		1%		
PD 4 of Toronto	94	27	113	164	131	122	46	97	22	816	7%	W		7%		
PD 5 of Toronto	36	70	23	71	0	35	50	51	128	464	4%	N			4%	
PD 6 of Toronto	170	197	410	411	168	447	330	653	256	3042	27%	N			27%	
PD 7 of Toronto	0	0	0	12	0	32	72	52	0	168	1%	W		1%		
PD 8 of Toronto	0	0	53	17	55	52	15	0	18	210	2%	W		2%		
PD 9 of Toronto	0	27	0	0	0	0	0	0	39	66	1%	W		1%		
PD 10 of Toronto	0	36	22	7	8	0	34	53	78	238	2%	W		2%		
PD 11 of Toronto	14	0	17	73	44	19	15	12	19	213	2%	N			2%	
PD 12 of Toronto	9	14	11	6	43	0	0	0	63	146	1%	N			1%	
PD 13 of Toronto	42	52	56	122	18	131	66	61	0	548	5%	E	5%			
PD 14 of Toronto	0	108	42	67	66	104	38	11	0	436	4%	E	4%			
PD 15 of Toronto	0	0	0	0	17	6	0	12	0	35	0%	E	0%			
PD 16 of Toronto	11	9	33	8	78	35	0	7	48	229	2%	E	2%			
Pickering	0	0	17	0	0	32	13	14	0	76	1%	E	1%			
Ajax	0	0	0	8	0	0	17	12	0	37	0%	E	0%			
Whitby	0	0	0	0	0	0	14	16	0	30	0%	E	0%			
Oshawa	0	15	0	0	50	10	0	9	0	84	1%	E	1%			
East Gwillimbury	0	9	0	0	0	0	0	0	0	9	0%	N			0%	
Newmarket	0	0	0	8	0	0	0	0	0	8	0%	N			0%	
Richmond Hill	0	0	41	0	0	75	50	0	0	166	1%	N			1%	
Whitchurch-Stouffville	0	18	40	0	0	0	0	0	0	58	1%	N			1%	
Markham	0	75	13	57	17	57	0	80	66	365	3%	N			3%	
Vaughan	10	10	0	135	34	15	40	12	16	272	2%	N			2%	
Caledon	0	0	0	0	0	13	0	37	0	50	0%	W		0%		
Brampton	0	0	13	0	0	57	0	12	14	96	1%	W		1%		
Mississauga	17	0	71	111	21	19	72	15	29	355	3%	W		3%		
Oakville	0	0	0	0	0	0	13	0	16	29	0%	W		0%		
Hamilton	0	10	0	48	0	0	0	0	0	58	1%	W		1%		
Cambridge	0	0	0	0	0	0	0	12	0	12	0%	W		0%		
City of Guelph	0	0	0	11	0	0	0	16	0	27	0%	W		0%		
Barrie	0	0	11	0	0	0	0	0	0	11	0%	N			0%	
Innisfil	15	0	0	0	0	0	0	0	0	15	0%	N			0%	
Bradford-West Gwillimbury	0	0	0	56	0	0	0	0	0	56	0%	N			0%	
										11419	100%	TOTAL	13%	45%	42%	0%

50% to Lee

25% to Lee

Fri Nov 11 2022 16:10:56 GMT-0500 (Eastern Standard Time) - Run Time: 3232ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(2006 GTA zone of destination - gta06_dest In 1, 251-258
and
Start time of trip - start_time In 1500-1900
and
Trip purpose of destination - purp_dest In M
and
Primary travel mode of trip - mode_prime In D, M

Trip 2016
Table:

Origin	Destination									Trips from Origi	Trip Distribution		Trip Assignment			
	1	251	252	253	254	255	256	257	258		Distribution	Direction From	From East	From West	From North	From South
PD 1 of Toronto	0	17	62	0	36	0	0	44	0	159	13%	W		13%		
PD 2 of Toronto	0	0	0	13	0	0	0	0	0	13	1%	W		1%		
PD 4 of Toronto	0	8	0	0	6	0	0	0	16	30	2%	W		2%		
PD 5 of Toronto	0	19	4	0	0	0	0	0	11	34	3%	N			3%	
PD 6 of Toronto	10	59	333	40	45	26	0	23	100	636	52%	N			52%	
PD 13 of Toronto	0	85	78	10	0	0	0	0	0	173	14%	E	14%			
PD 14 of Toronto	0	12	48	0	11	0	0	7	0	78	6%	E	6%			
Pickering	0	0	0	0	0	0	12	0	0	12	1%	E	1%			
Aurora	0	0	27	0	0	0	0	0	0	27	2%	N			2%	
Markham	0	0	30	0	0	0	0	0	0	30	2%	N			2%	
Mississauga	0	0	0	9	0	0	0	0	0	9	1%	W		1%		
Hamilton	0	0	0	0	0	11	0	0	0	11	1%	W		1%		
										1212	100%	TOTAL	22%	18%	60%	0%

50% from Lee

25% from Lee

Fri Nov 11 2022 16:07:47 GMT-0500 (Eastern Standard Time) - Run Time: 2581ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(2006 GTA zone of origin - gta06_orig In 1,251-258
and
Start time of trip - start_time In 1500-1900
and
Trip purpose of origin - purp_orig In M
and
Primary travel mode of trip - mode_prime In D, M

Trip 2016
Table:

Destination	Origin									Trips to Destination	Trip Distribution		Trip Assignment			
	1	251	252	253	254	255	256	257	258		Distribution	Direction To	To East	To West	To North	To South
PD 1 of Toronto	0	0	0	0	6	0	0	0	0	6	0%	W		0%		
PD 2 of Toronto	0	0	0	0	0	0	0	18	0	18	1%	W		1%		
PD 6 of Toronto	10	209	432	39	101	26	0	45	116	978	78%	N			78%	
PD 13 of Toronto	0	29	40	0	0	0	12	0	0	81	6%	E	6%			
PD 14 of Toronto	0	11	84	29	11	0	0	0	0	135	11%	E	11%			
PD 16 of Toronto	0	28	0	0	0	0	0	0	0	28	2%	E	2%			
Whitby	0	0	0	0	0	0	0	10	0	10	1%	E	1%			
										1256	*100%*	*TOTAL*	*20%*	*2%*	*78%*	*0%*

50% to Lee

25% to Lee

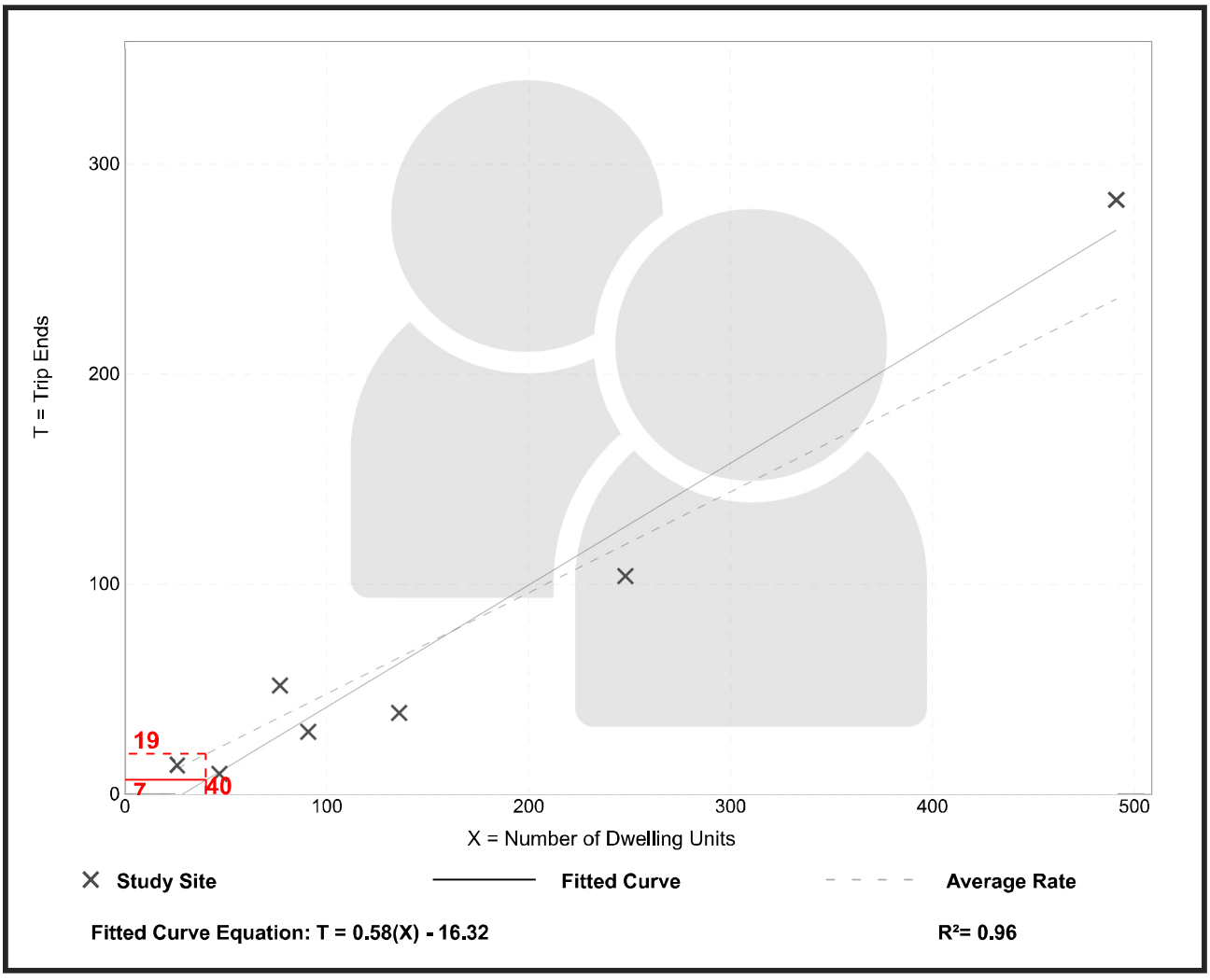
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Person Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	159
Directional Distribution:	23% entering, 77% exiting

Person Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.21 - 0.68	0.14

Data Plot and Equation



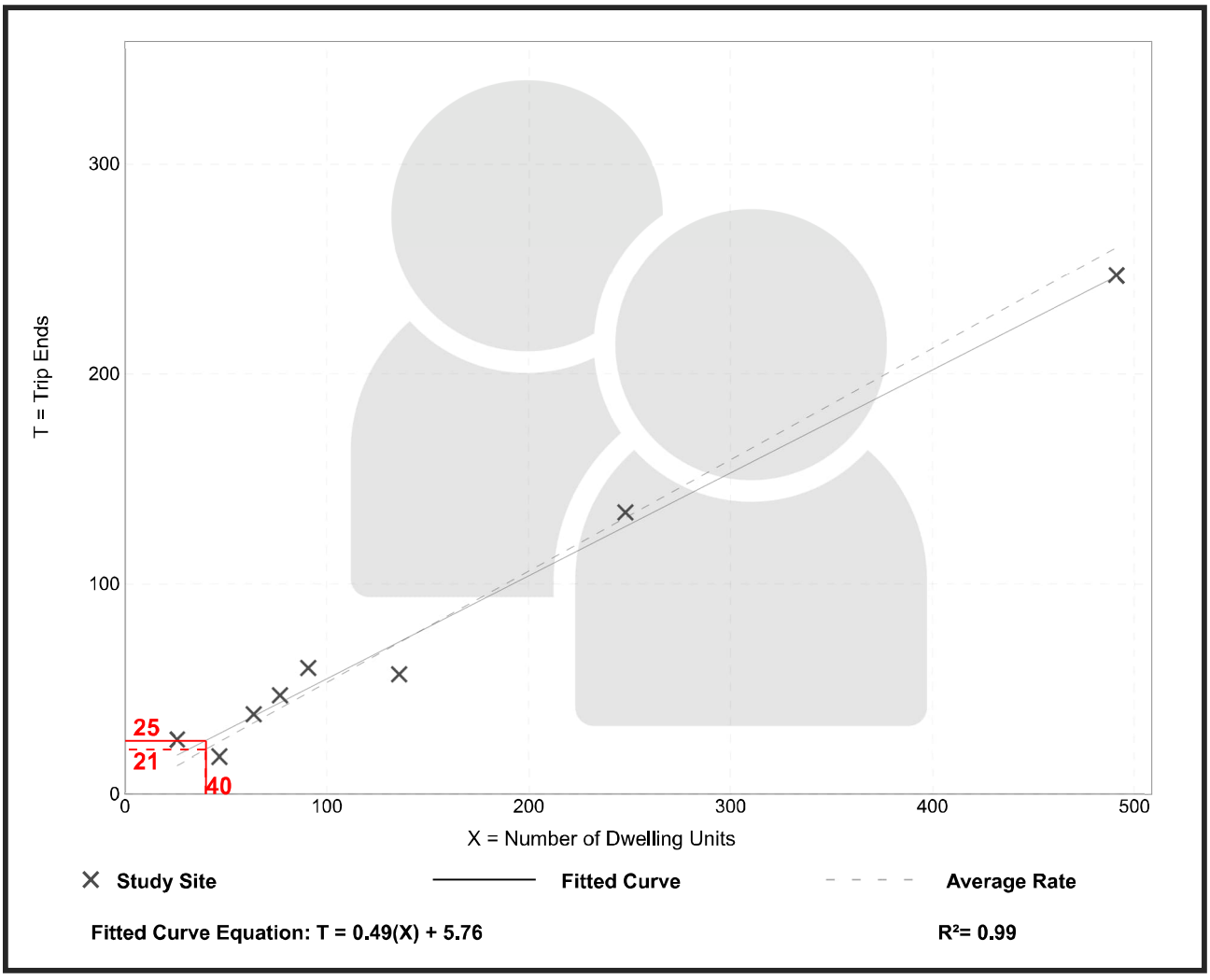
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Person Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. Num. of Dwelling Units: 148
Directional Distribution: 59% entering, 41% exiting

Person Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.53	0.38 - 1.00	0.10

Data Plot and Equation



APPENDIX C

Intersection Capacity Analysis (All Scenarios)

LEVELS OF SERVICE FOR SIGNALIZED INTERSECTIONS: METHODOLOGY

Signalized intersection analyses contained in this report were carried out using methodology described in the ***Highway Capacity Manual,*** *2000 update*, by the Transportation Research Board and implemented using Synchro 11 software.

Analyses of signalized intersections compare the volume of traffic passing through an intersection with the capacity of each of the intersection's approaches. Volumes can be either observed or estimated whereas an intersection's capacity is a function of its geometry, the number of lanes per approach, speeds, signal timing, and other considerations. The level of service is evaluated in terms of the average control delay (seconds) per vehicle, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Delay is a complex measure and is calculated as a function of a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group in question.

The criteria for each level of service are given below.

Level of Service	Features	Control Delay (sec/veh)
A	Very low control delay. Occurs when signal progression (i.e. coordination) is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not have to stop.	0.0 – 10.0
B	Occurs with good progression, short cycle length, or both. More vehicles stop than with LOS A.	10.1 – 20.0
C	Occurs with fair progression, longer cycle length, or both. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.	20.0 – 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles have to stop. Individual cycle failures are noticeable (i.e. some vehicles require more than one cycle to make it through the intersection).	35.0 – 55.0
E	Considered by many agencies to be the limit of acceptable delay. High delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.	55.0- 80.0
F	Considered to be unacceptable to most drivers and often occurs with oversaturation. It may also occur at high v/c ratios below 1.0 with many individual cycle failures.	80.1 +

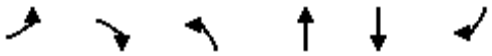
LEVELS OF SERVICE FOR UNSIGNALIZED INTERSECTIONS: METHODOLOGY

Unsignalized intersection analyses contained in this report were carried out using methodology described in the ***Highway Capacity Manual*** *(2000 edition)* by the Transportation Research Board and implemented using the Synchro 11 software.

Analyses of unsignalized intersections compare observed or estimated traffic volumes with the capacity of each of the intersection's approaches. The analysis derives an estimation of queue lengths and the resulting delays experienced by vehicles from the time they join a queue to the moment they cross the stop bar at the intersection. Queuing and delays at unsignalized approaches are a function of the volumes of all other conflicting movements and the characteristics of the intersection. Traffic volumes can be either observed or estimated while an intersection's capacity is a function of its geometry, lane configurations, speeds, and other operational considerations. The resulting statistic is termed "average total delay" for each approach and is measured in seconds per vehicle. The delay can then be assigned a letter grade, which provides a simple qualitative assessment of the Level of Service for any unsignalized intersection.

The Level of Service grading for unsignalized intersections is more sensitive than that used for signalized analyses: delays are more onerous at unsignalized intersections as drivers must remain attentive while waiting for acceptable conditions to complete their movement. As a result, the thresholds between grades are lower for unsignalized analyses.

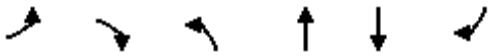
Level of Service	Features	Average Total Delay (sec/veh)
A	Almost no delay occurs. Approaches appear clear and turns are made easily.	0.0 – 10.0
B	Short delays are experienced. Drivers find their movement becoming more restricted.	10.1 – 15.0
C	Longer delays occur. Operation of both the minor and major streets are generally stable but movements from the minor street become more difficult. This level is often used for urban intersection design standards.	15.1 – 25.0
D	Motorists encounter increasing traffic restrictions and substantial delays. Delays on the major street occur as turning traffic interferes with the flow of traffic. Traffic flows are approaching the capacity of the intersection.	25.1 - 35.0
E	At level "E", capacity is reached. There are long queues of vehicles waiting upstream for the approach to clear. Delays to vehicles reach frustrating levels.	35.1- 50.0
F	Intersection saturation occurs as vehicle demand has exceeded the capacity. Drivers will often accept less than ideal gap opportunities; safety is compromised.	50.1 +



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	4	1	24	95	0
Future Volume (Veh/h)	1	4	1	24	95	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1	4	1	27	106	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	135	106	106			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	135	106	106			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	863	954	1498			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	28	106
Volume Left	1	1	0
Volume Right	4	0	0
cSH	934	1498	1700
Volume to Capacity	0.01	0.00	0.06
Queue Length 95th (m)	0.1	0.0	0.0
Control Delay (s)	8.9	0.3	0.0
Lane LOS	A	A	
Approach Delay (s)	8.9	0.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	15.0%	ICU Level of Service	A
Analysis Period (min)	15		



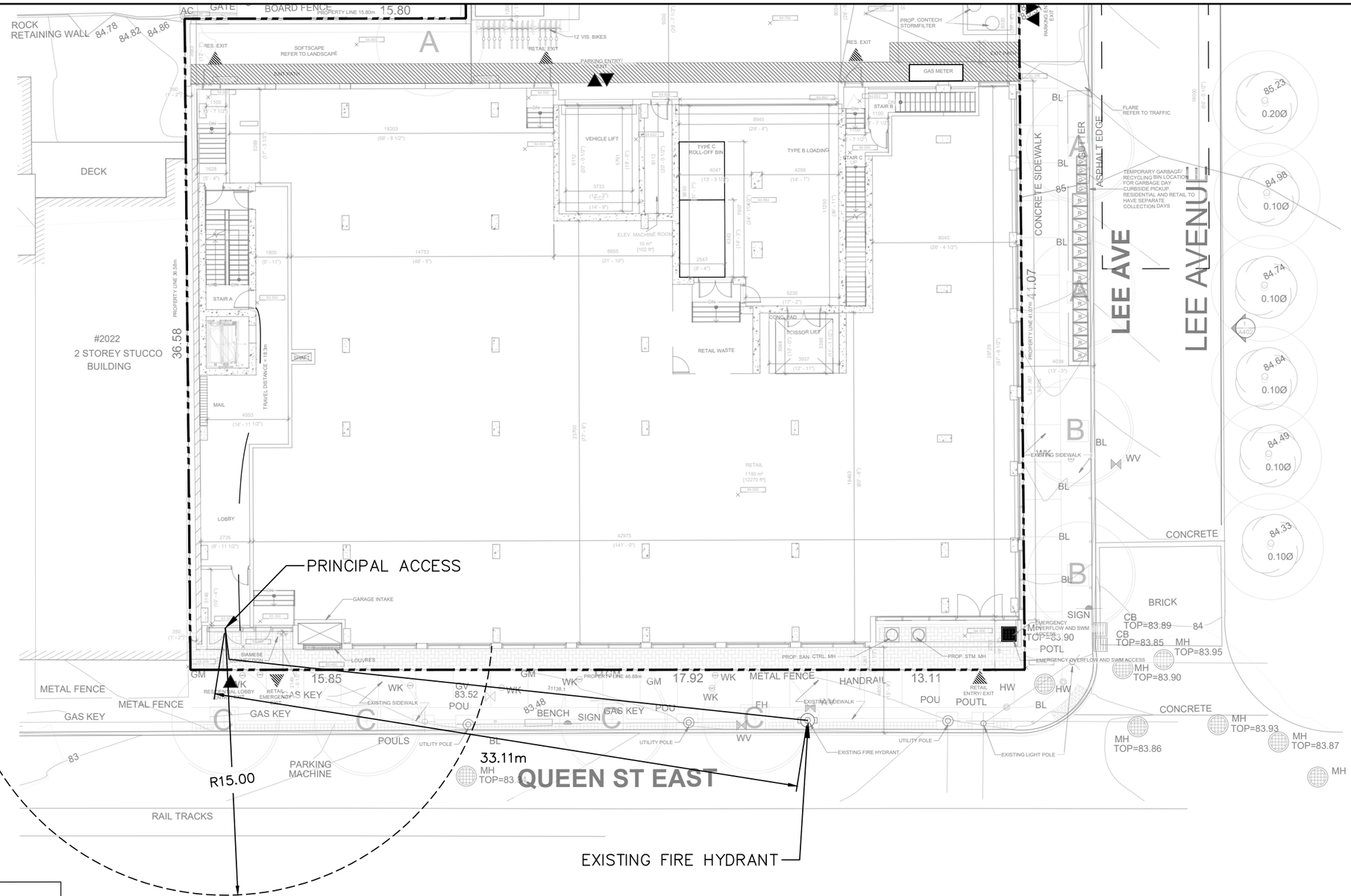
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	3	3	61	77	1
Future Volume (Veh/h)	0	3	3	61	77	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	3	3	64	81	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	152	82	82			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152	82	82			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	843	984	1528			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	3	67	82
Volume Left	0	3	0
Volume Right	3	0	1
cSH	984	1528	1700
Volume to Capacity	0.00	0.00	0.05
Queue Length 95th (m)	0.1	0.0	0.0
Control Delay (s)	8.7	0.3	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	0.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	15.7%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX D

Functional Design Review and Swept Path Diagrams



NOTE:
PER ONTARIO BUILDING CODE SECTION 3.2.5.5:
ACCESS ROUTES REQUIRE THAT THE PRINCIPAL ENTRANCES ARE LOCATED NOT LESS THAN 3m AND NOT MORE THAN 15m FROM THE CLOSEST PORTION OF THE ACCESS ROUTE REQUIRED FOR THE FIRE DEPARTMENT USE, MEASURED HORIZONTALLY FROM THE FACE OF THE BUILDING. HENCE, FIRE TRUCKS MAY PARK ALONG QUEEN ST E.

PLOT DATE: December 6, 2023

DRAWN BY: A.E.

LEA Consulting Ltd.
Consulting Engineers and Planners
www.LEA.ca

Project No.
23226.01

Date
DEC 6, 2023

2026 Queen Street E
TORONTO ONTARIO

2.5 0 2.5 5 7.5m
1:250

GROUND FLOOR
FIRE ROUTE REVIEW

Drawing No.
001

DRAWING NAME: F:\23226.01\Drafting\23226.01 WF010.dwg

NOTE:

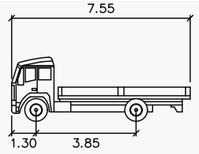
1. A TRAINED ON-SITE STAFF TO ACT AS A FLAGMAN WHEN THE TRUCK IS REVERSING. IN THE EVENT WHEN THE ON-SITE STAFF MEMBER IS UNAVAILABLE AT THE TIME THE COLLECTION VEHICLE ARRIVES AT THE SITE, THE COLLECTION VEHICLE WILL LEAVE THE SITE AND NOT RETURN UNTIL THE NEXT SCHEDULED COLLECTION DAY.
2. FLASHING WARNING LIGHT TO BE ACTIVATED WHEN TRUCKS ENTER AND EXIT THE SITE. THE SYSTEM TO REMAIN ACTIVATED DURING THE GARBAGE COLLECTION ACTIVITY AND UNTIL THE TRUCK EXITS THE SITE.
3. WARNING SIGN TO BE MOUNTED BELOW THE FLASH LIGHT.
4. OWNER TO CONFIRM THE PRIVATE TRUCKS SPECIFICATION AND AVAILABILITY WITH SUPPLIER, SERVICE PROVIDER, AS WELL AS THE OWNER'S WASTE CONSULTANT.
5. FOR FURTHER TRUCK DETAILS AND VERTICAL CLEARANCE REQUIREMENTS, REFER TO DRAWING 02C PREPARED BY LEA.

WATCH FOR TURNING TRUCKS WHEN FLASHING

(600x300)
BLACK LEGEND & BORDER,
WHITE REFL. BACKGROUND.

.

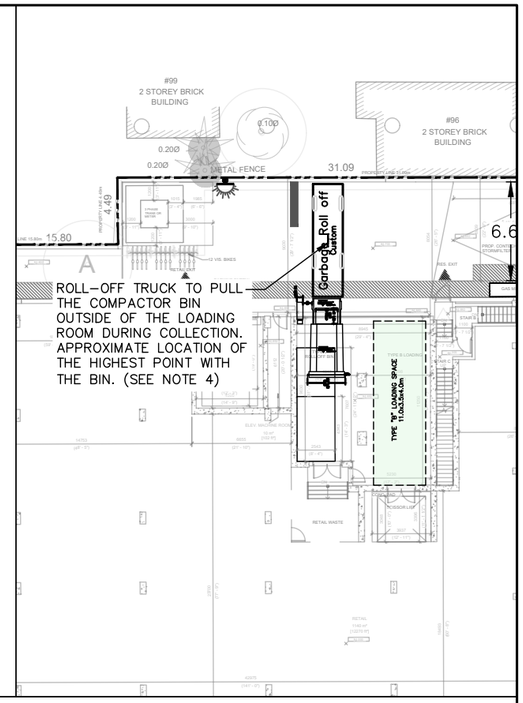
ENTRY PATH



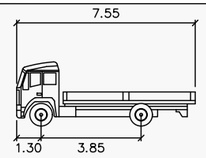
Garbage Roll off

	meters
Width	: 2.00
Track	: 2.10
Lock to Lock Time	: 6.0
Steering Angle	: 41.0

PRIVATE ROLL-OFF GARBAGE VEHICLE SUBJECT TO CITY'S APPROVAL



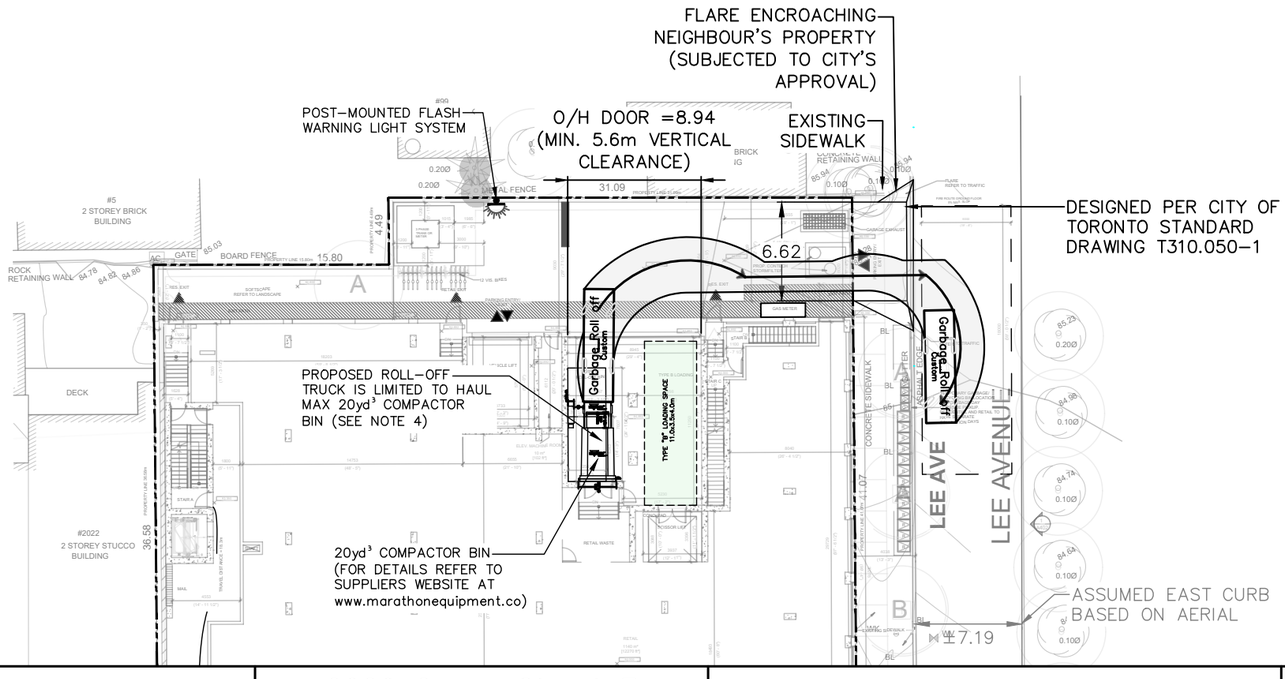
EXIT PATH



Garbage Roll off

	meters
Width	: 2.00
Track	: 2.10
Lock to Lock Time	: 6.0
Steering Angle	: 41.0

PRIVATE ROLL-OFF GARBAGE VEHICLE SUBJECT TO CITY'S APPROVAL



PLOT DATE: December 6, 2023

DRAWN BY: A.E.

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Project No. 23226.01

Date DEC 6, 2023

FLASH WARNING LIGHT SYSTEM

2026 Queen Street E
TORONTO ONTARIO

4 0 4 8 12m
1:400

GROUND FLOOR GARBAGE TRUCK PATH REVIEW PRIVATE RETAIL PICK-UP GFL ROLL-OFF TRUCK

Drawing No. 02A

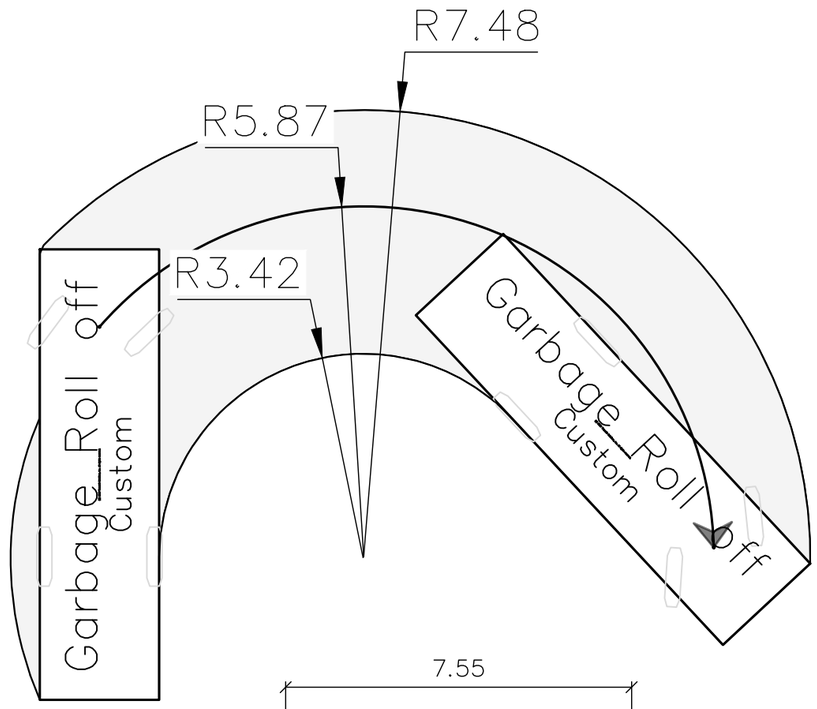
DRAWING NAME: F:\23226.01\Drafting\23226.01 WF010.dwg

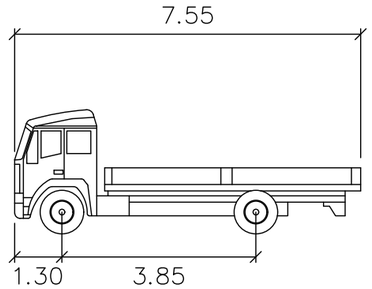
Dimensions of the vehicle:

Length: 7.55m
Front – First Wheel: 1.30m
Wheelbase : 3.85m
Width: 2.00m
Track: 2.10m
Lock to Lock Time: 6.0m
Steering Angle: 41.0m
Centerline Turning Radius: 5.87 m
Vertical Clearance: 7.8m
(BASED ON 20yd^3 BIN. THE EXACT VERTICAL CLEARANCE TO BE VERIFIED WITH CONTRACTOR AND SUPPLIER)

Disclaimer:

- Autoturn software was used to create the vehicle and to plot the paths.
- The above dimensions to be read with the truck profile shown below.
- All dimensions are shown in meters, unless otherwise noted.
- Owner to confirm the private truck's specifications and availability with supplier, service provider, as well as the owner's waste consultant.





Garbage Roll off

	meters
Width	: 2.00
Track	: 2.10
Lock to Lock Time	: 6.0
Steering Angle	: 41.0

PLOT DATE: December 6, 2023

DRAWN BY: A.E.

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Project No. 23226.01

Date DEC 6, 2023

2026 Queen Street E
TORONTO ONTARIO

1 0 1 2 3m
1:100

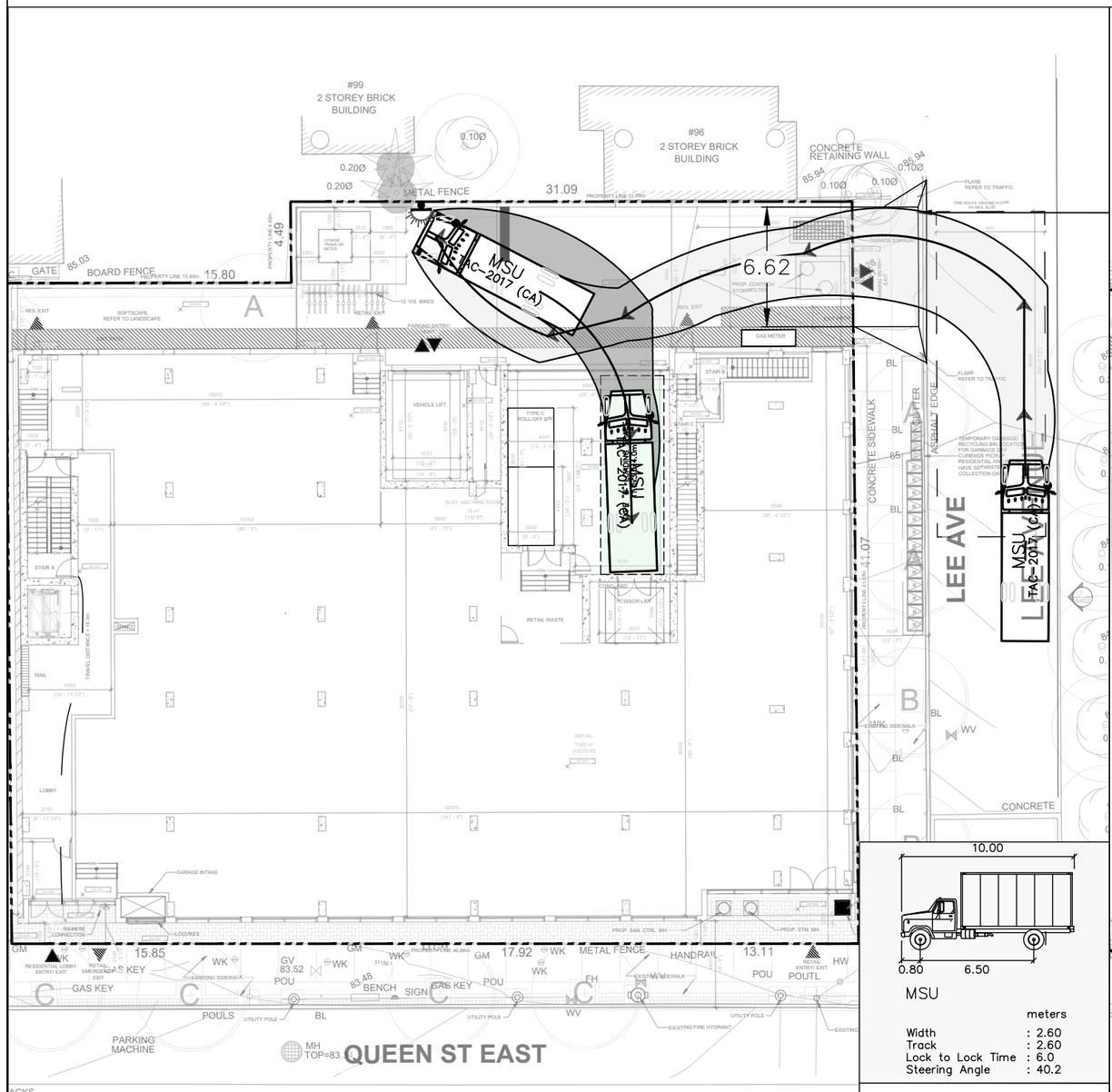
GFL ROLL-OFF TRUCK DETAILS
(FOR ILLUSTRATION PURPOSES ONLY)

Drawing No. 02B

DRAWING NAME: F:\23226.01\Drafting\23226.01 WF010.dwg

PER CITY OF TORONTO ZONING BY-LAW 569-2013:

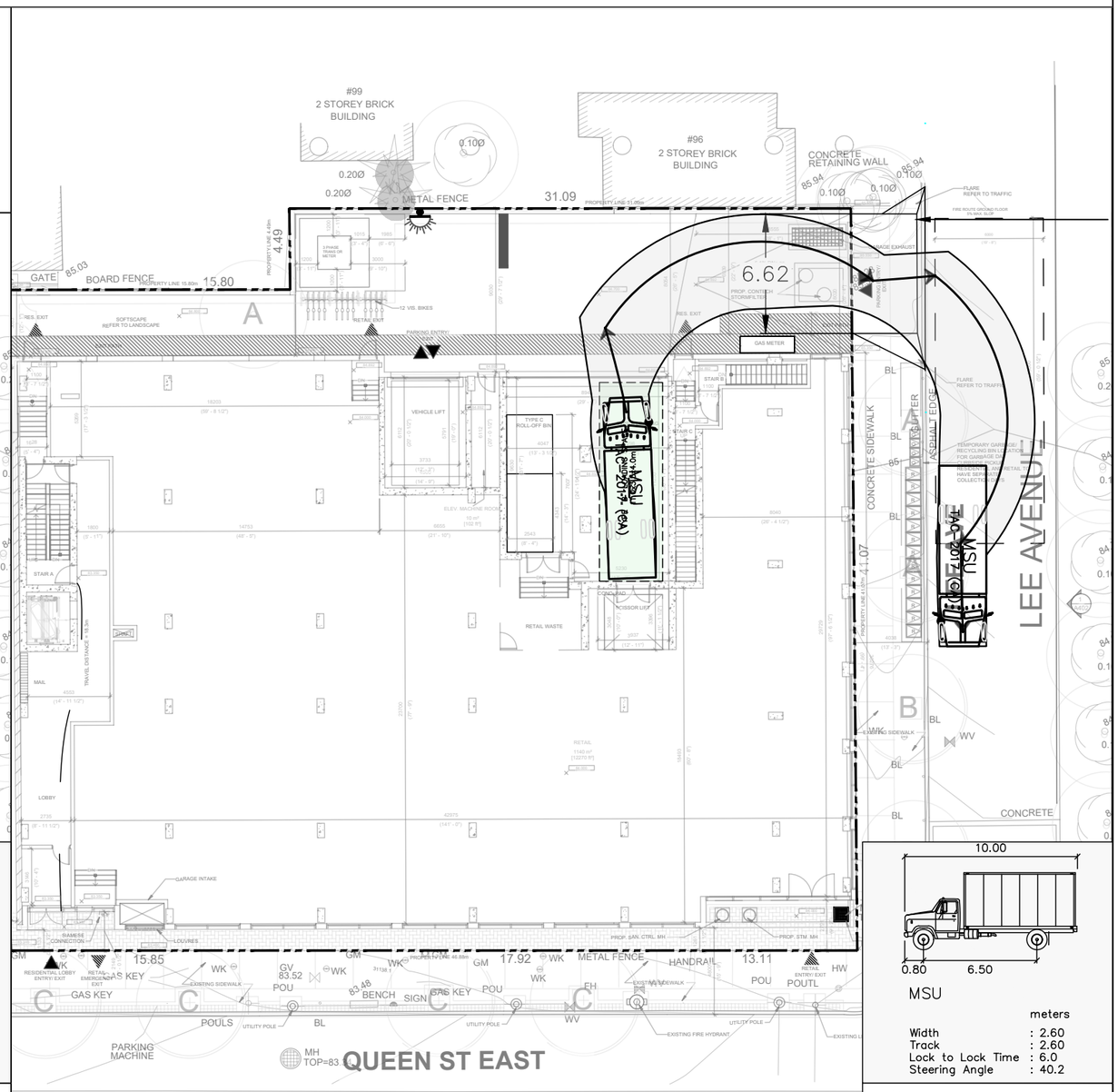
1. TYPE "B" LOADING AREA SHALL HAVE A DIMENSION OF 11.0m LENGTH x 3.5m WIDTH x 4.0m VERTICAL LOADING CLEARANCE.
2. A DRIVEWAY TO A LOADING SPACE MUST BE 6.0m FOR A TWO-WAY DRIVEWAY.



meters

Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.2

ENTRY PATH



meters

Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.2

EXIT PATH

PLOT DATE: December 6, 2023

DRAWN BY: A.E.

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Project No.
23226.01

Date
DEC 6, 2023

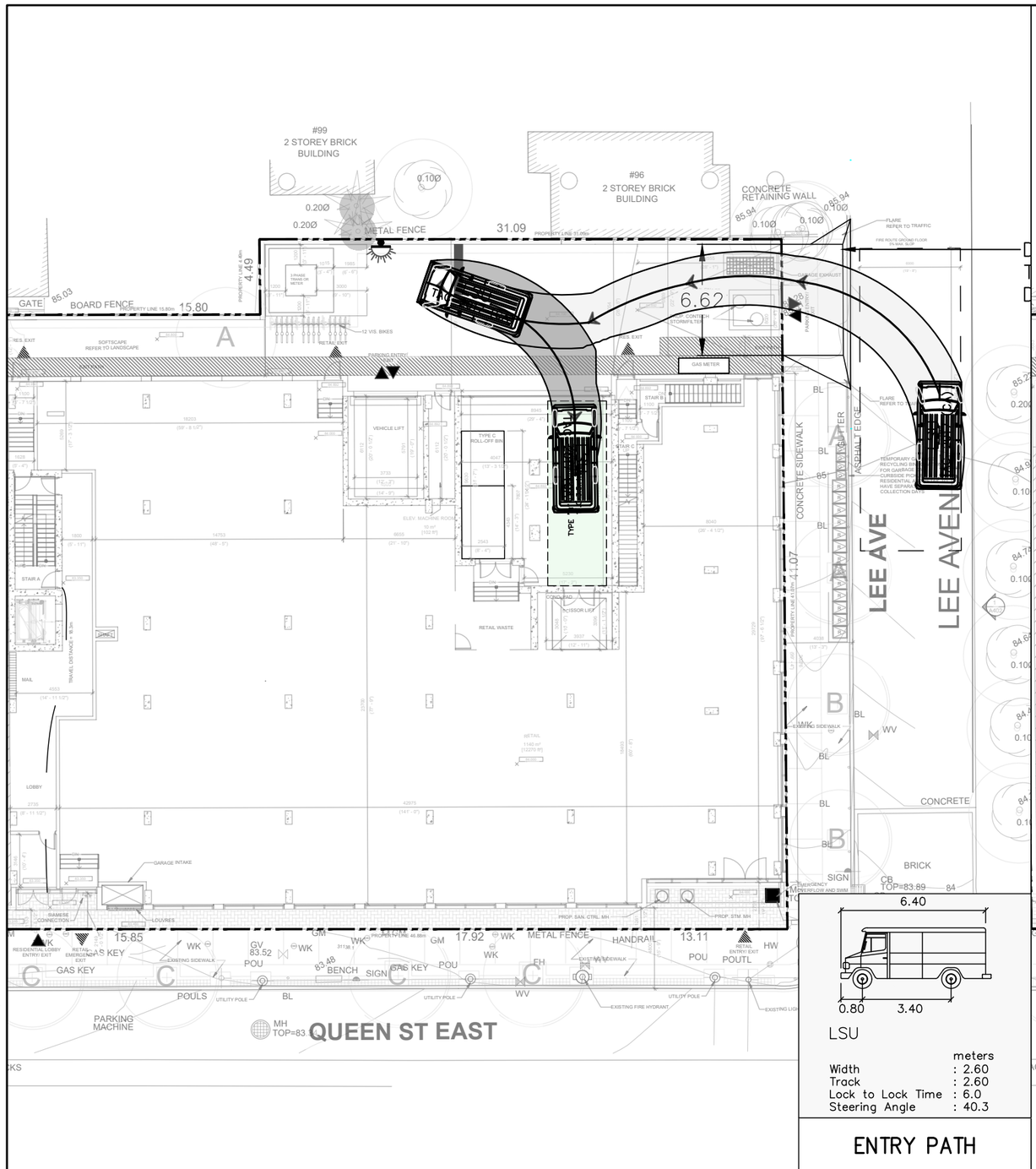
2026 Queen Street E
TORONTO ONTARIO

3 0 3 6 9m
1:300

GROUND FLOOR
MSU TRUCK PATH REVIEW

Drawing No.
003

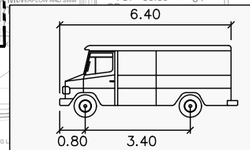
DRAWING NAME: F:\23226.01\Drafting\23226.01 WF010.dwg



LSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.3

ENTRY PATH



LSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.3

EXIT PATH

PLOT DATE: December 6, 2023

DRAWN BY: A.E.

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Project No.
23226.01

Date
DEC 6, 2023

2026 Queen Street E
TORONTO ONTARIO

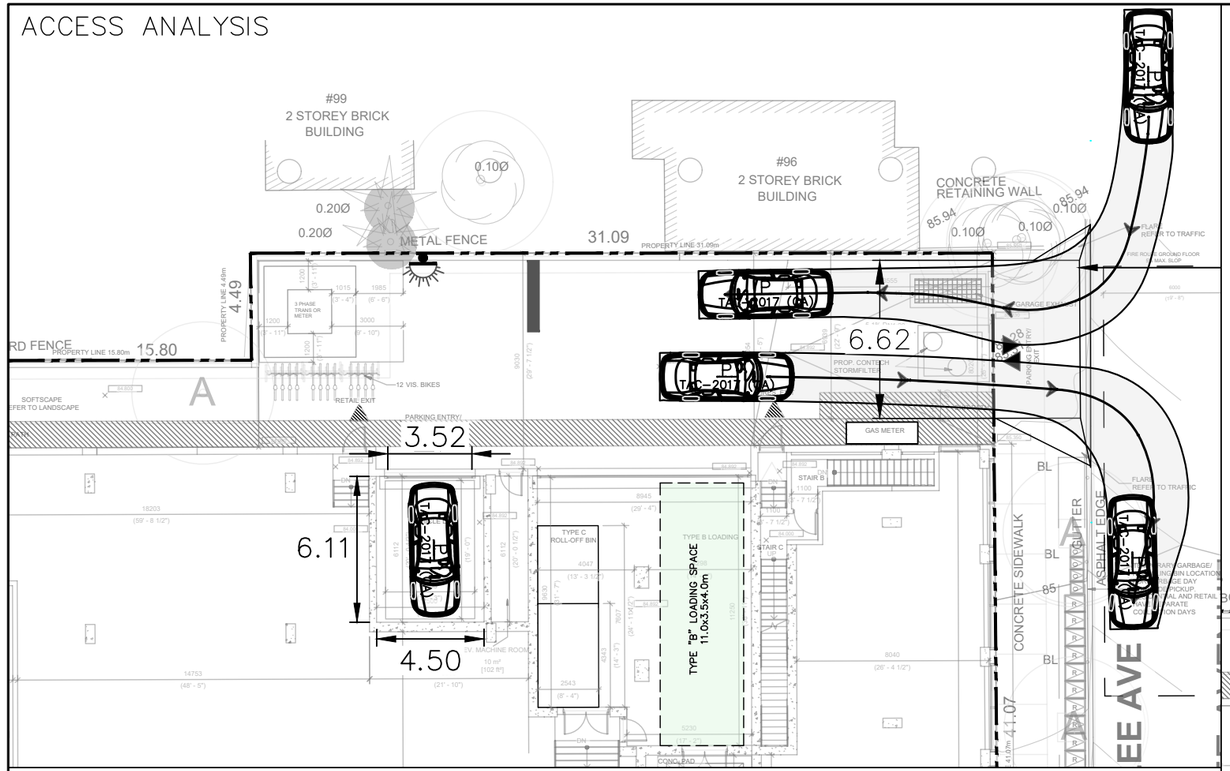
3 0 3 6 9m
1:300

GROUND FLOOR
LSU TRUCK PATH REVIEW

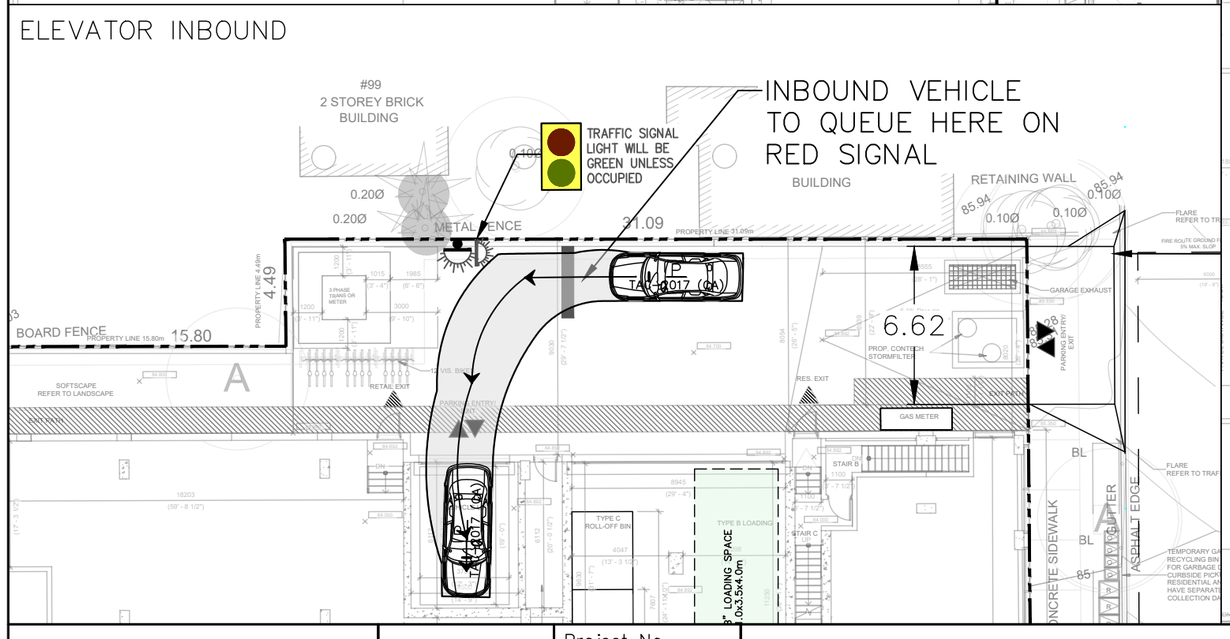
Drawing No.
004

DRAWING NAME: F:\23226.01\Drafting\23226.01 WF010.dwg

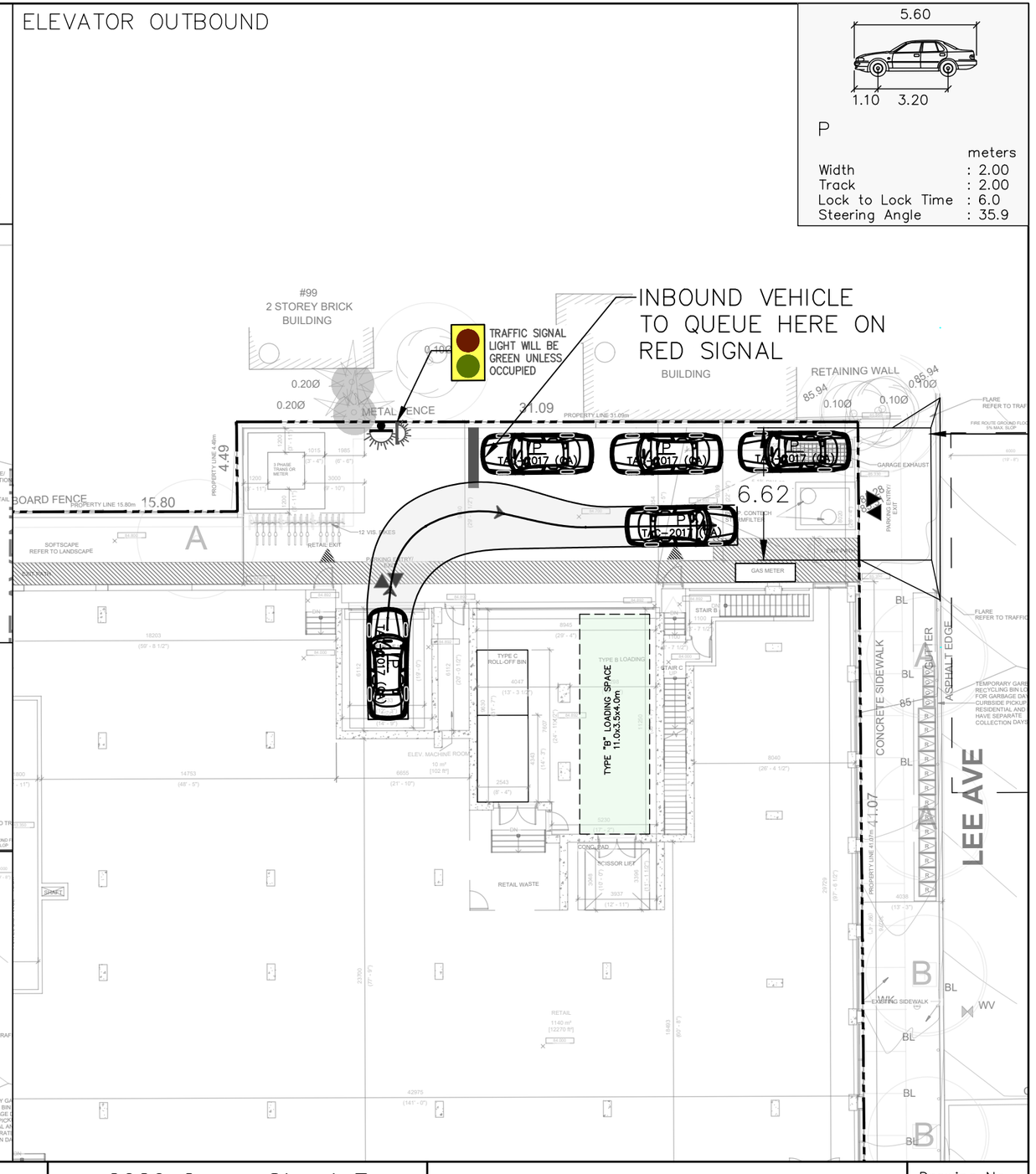
ACCESS ANALYSIS



ELEVATOR INBOUND



ELEVATOR OUTBOUND



PLOT DATE: December 6, 2023

DRAWN BY: A.E.

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Project No.
23226.01

Date
DEC 6, 2023

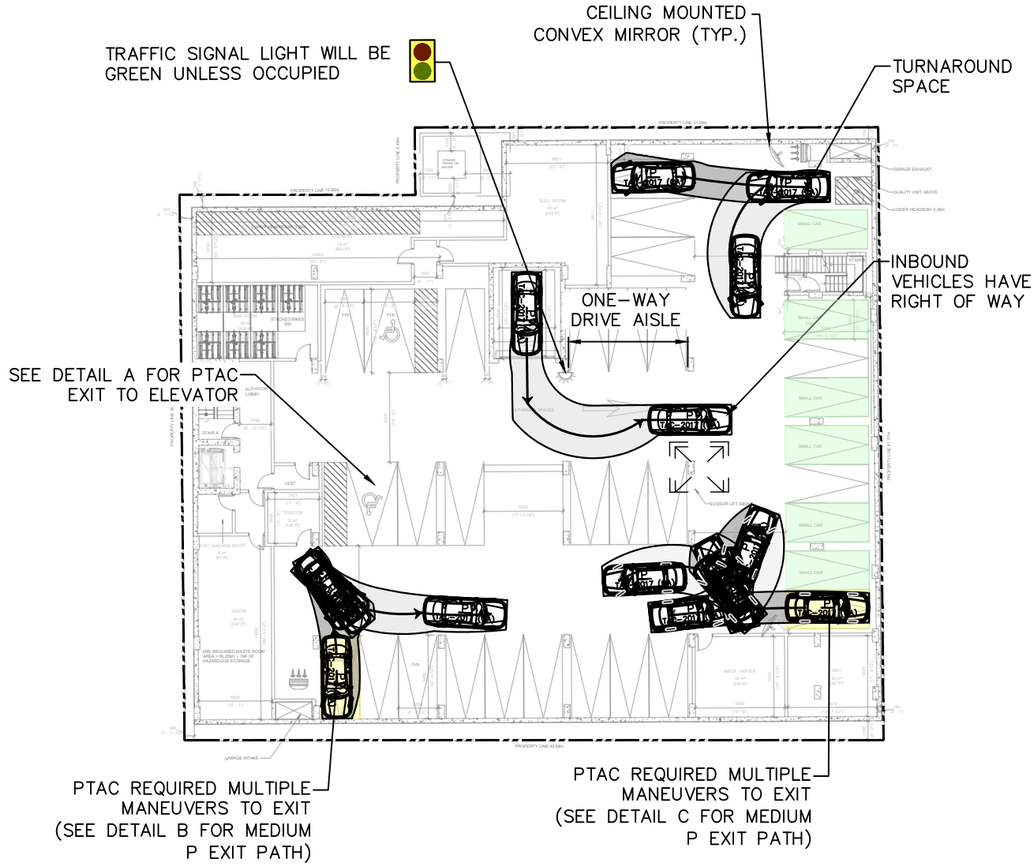
2026 Queen Street E
TORONTO ONTARIO

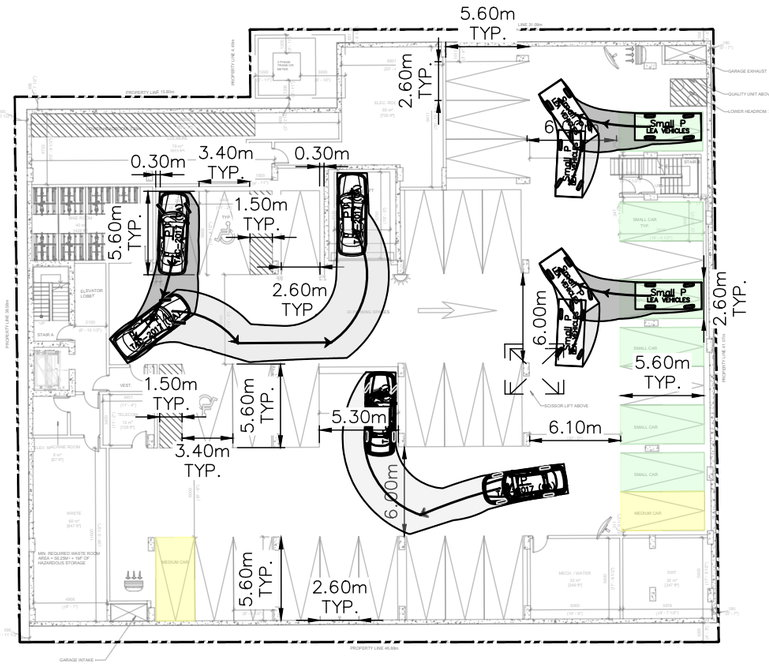
2.5 0 2.5 5 7.5m
1:250

GROUND FLOOR
PASSENGER VEHICLE REVIEW

Drawing No.
005

DRAWING NAME: F:\23226.01\Drafting\23226.01 WF010.dwg



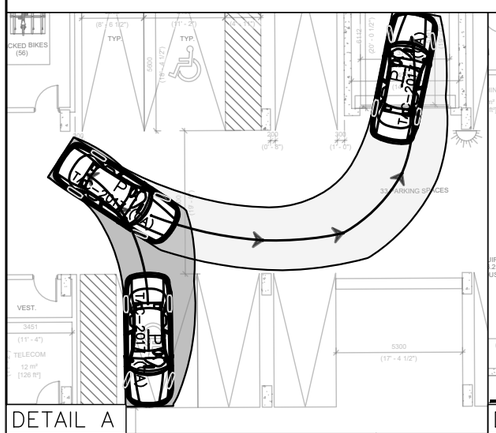


NOTES:
CITY OF TORONTO ZONING BY-LAW 569-2013:

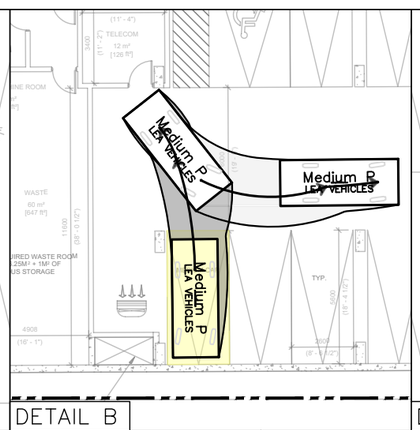
1. IF THE CENTRELINE OF A PARKING SPACE IS AT AN INTERIOR ANGLE OF 70 TO 90 DEGREES TO THE CENTRELINE OF THE DRIVE AISLE PROVIDING VEHICLE ACCESS, THE MINIMUM WIDTH FOR THAT ONE OR TWO LANE DRIVE AISLE IS 6.0 METRES.
2. A PARKING SPACE MUST HAVE THE FOLLOWING MINIMUM DIMENSIONS:
   - LENGTH OF 5.6 METRES;
   - WIDTH OF 2.6 METRES; AND
   - VERTICAL CLEARANCE OF 2.0 METRES;
3. A PARKING SPACE THAT IS ADJACENT AND PARALLEL TO A DRIVE AISLE FROM WHICH VEHICLE ACCESS IS PROVIDED MUST HAVE THE FOLLOWING MINIMUM DIMENSIONS:
   - LENGTH OF 6.7 METRES;
   - WIDTH OF 2.6 METRES; AND
   - VERTICAL CLEARANCE OF 2.0 METRES;
4. AN ACCESSIBLE PARKING SPACE MUST HAVE THE FOLLOWING MINIMUM DIMENSIONS:
   - LENGTH OF 5.6 METRES;
   - WIDTH OF 3.4 METRES; AND
   - VERTICAL CLEARANCE OF 2.1 METRES
5. THE SIDE OF A PARKING SPACE IS OBSTRUCTED IF ANY PART OF A FIXED OBJECT SUCH AS A WALL, COLUMN, BOLLARD, FENCE OR PIPE IS SITUATED:
   - WITHIN 0.3 METRES OF THE SIDE OF THE PARKING SPACE, MEASURED AT RIGHT ANGLES, AND
   - MORE THAN 1.0 METRE FROM THE FRONT OR REAR OF THE PARKING SPACE.

SMALL P PARKING SPACE

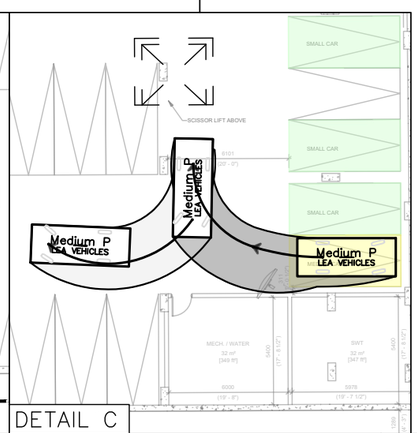
MEDIUM P PARKING SPACE



DETAIL A



DETAIL B



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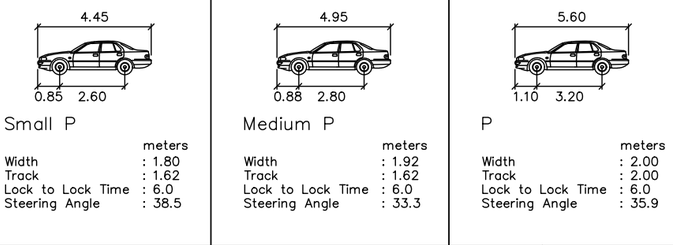

PLOT DATE: December 6, 2023

DRAWN BY: A.E.

LEA Consulting Ltd.
Consulting Engineers and Planners
www.LEA.ca

Project No.
23226.01

Date
DEC 6, 2023

2026 Queen Street E
TORONTO ONTARIO

4 0 4 8 12m
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PARKING REVIEW – LEVEL P1
ONE WAY OUTBOUND
PASSENGER VEHICLE (PTAC), MEDIUM P, AND SMALL P

Drawing No.
006

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