953 Mapleview Drive East (Block 192)

City of Barrie

Traffic Brief / Parking Study / Construction Traffic Management Plan for Mapleview South (Innisfil) Ltd.

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1 Introduction

1.1 Background

Mapleview South (Innisfil) Ltd. [The Developer] is proposing a residential condominium development on Block 192, within the 953 Mapleview Drive East subdivision, located within the Hewitt's Secondary Plan Area in the City of Barrie [City]. A traffic brief was prepared by JD Engineering in May 2021 in support of this development. This report has been prepared to address the impact of the changes to the site concept for Block 192.

The subject site is located on the south side of Mapleview Drive between Prince William Way and 20th Sideroad (an excerpt showing the Mapleview South (Innisfil) Ltd. lands is provided in **Appendix A**). Block 192 includes a total of 120 medium-density residential units.

The 953 Mapleview Drive East subdivision includes one intersection access onto Mapleview Drive East [Site Access]. Previously this intersection was to be full-movement, but it has since been confirmed that the Site Access will be restricted to right-in right-out [RIRO] functionality only. Roadway connections are also planned through lands to the east, west, and south.

The Developer has retained **JD Northcote Engineering Inc.** [JD Engineering] to prepare this Traffic Brief / Parking Study / Construction Traffic Management Plan in support of the proposed residential development in Block 192.

The subject lands were considered as part of the Hewitt's Transportation Study (LEA Consulting Ltd. February 2017) which has since been updated (February 2019). This Traffic Brief will build on and update the findings of the updated Hewitt's Transportation Study and other traffic projections in the local area.

1.2 Study Area

Figure 1 shows the location of the subject site and study area intersections in relation to the surrounding area. The Draft Plan of Subdivision by Jones Consulting Group Limited is shown in **Appendix B**.

The subject site is bound by Mapleview Drive East to the north and future residential lands to the east, west and south.

Through consultation with the City, the following intersections are included in the Traffic Brief:

- Mapleview Drive East / Site Access.

Figure 1 – Proposed Site Location and Study Area

1.3 Study Scope and Objectives

The purpose of this study is to identify the potential impacts to traffic flow at the site access and on the surrounding roadway network. The study analysis includes the following tasks:

- Consult with the City to address any traffic-related issues or concerns they have with the proposed development;
- Estimate future traffic volumes through the study area based on the updated Hewitt's Transportation Study, the City's Emme models and the most recent development plans;
- Complete a LOS analysis of horizon year traffic conditions and identify additional operational deficiencies;
- Review the need for auxiliary turn lanes at the study intersection;
- Identify improvement options to address operational deficiencies; and
- Document findings and recommendations in a final report.

1.4 Horizon Year and Analysis Periods

The 2026 and 2031 horizon years were selected for analysis of traffic operations in the study area. The 2026 horizon was chosen to evaluate the need for temporary improvements on Mapleview Drive East, prior to the road widening which is anticipated to be completed by the City post 2026 (the City currently does not have a set timeline for the planned road widening). The weekday morning [AM] and weekday afternoon [PM] peak hours have been selected as the analysis periods for this study.

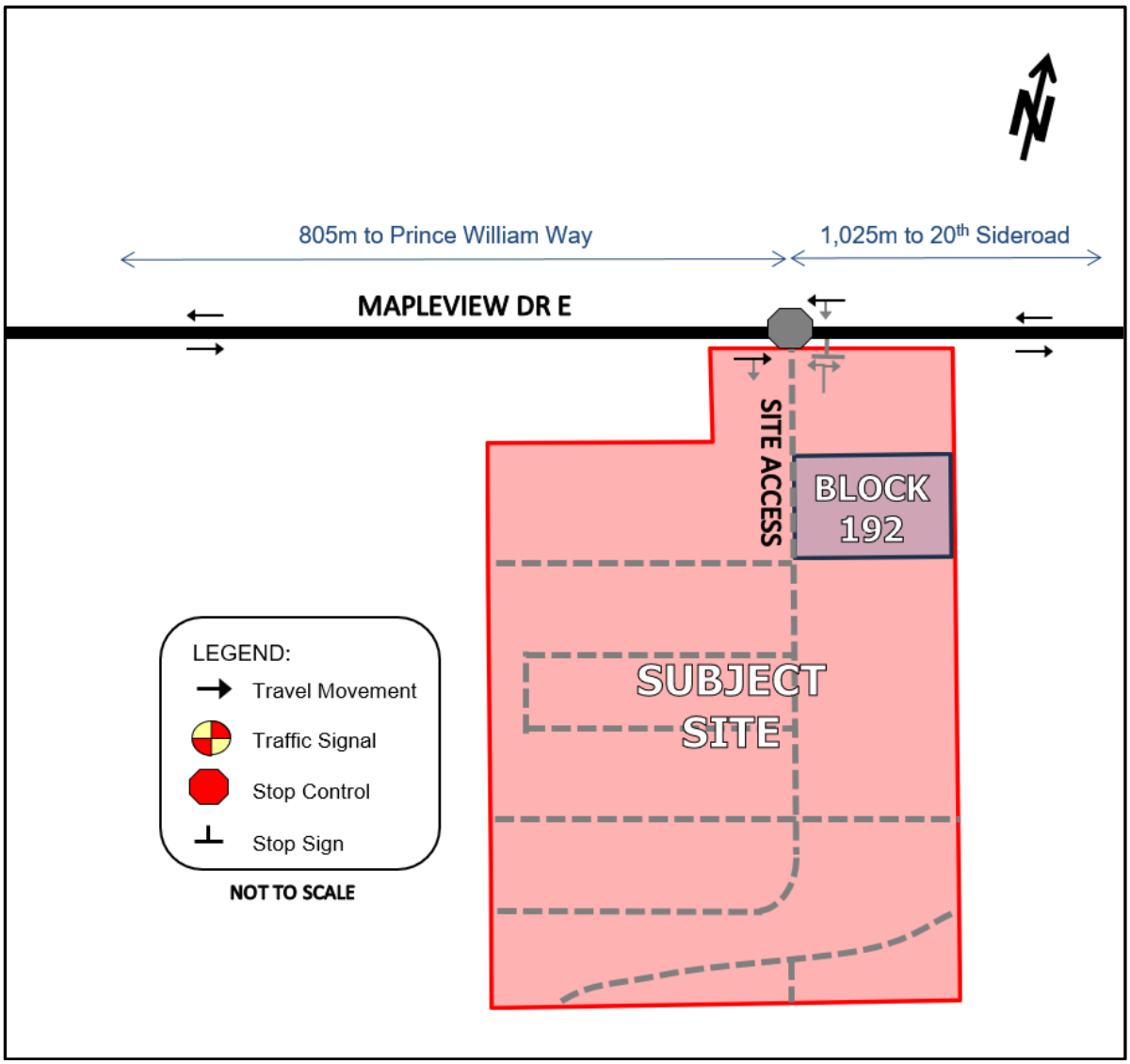
2 Information Gathering

2.1 Street and Intersection Characteristics

Mapleview Drive East is a two-lane arterial road with a rural cross-section within the study area. Mapleview Drive East has a posted speed limit of 60km/h and is under the jurisdiction of the City.

The existing intersection spacing and lane configuration within the study area is illustrated in **Figure 2**.

Figure 2 – Existing (2024) Intersection Spacing and Lane Configuration within Study Area



2.2 Local Transportation Infrastructure Improvements

In review of the City's Capital Project Detail Report, the following road improvements are anticipated within the study area:

- Mapleview Drive East (within study area)
  - Addition of two way left turn lane to provide a 3-lane cross-section;
  - Buffered bike lanes;
  - Sidewalk on the south side of the road; and
  - Multi-use trail on the north side.

Based on our correspondence with the City, it is our understanding that these improvements have been delayed to post 2026. It is also noted that the City is considering the construction of a 5-lane cross-section on Mapleview Drive East between Prince William Way and Terry Fox Drive, rather than the

previously planned 3-lane cross-section. However, in order to be conservative, the 3-lane cross-section has been used in the traffic modeling.

2.3 Traffic Data

A review of the City's Emme model was completed to establish the projected traffic volumes adjacent to the Subject Site during the 2026 and 2031 horizon years (Excerpts are provided in **Appendix C**). A summary of the traffic data is provided in **Table 1**.

Table 1 – Traffic Data

ROAD	Section	2016				2031			
		AM		PM		AM		PM	
		EB	WB	EB	WB	EB	WB	EB	WB
Mapleview Dr E	East of Prince William Way	196	147	299	158	490	664	797	515

The 2026 horizon year traffic volumes are provided in are **Table 2**, estimated by interpolating between the 2016 and 2031 Emme volumes.

Table 2 – 2026 Horizon Year Traffic Volumes

ROAD	Section	2026			
		AM		PM	
		EB	WB	EB	WB
Mapleview Dr E	East of Prince William Way	392	492	631	396

3 Proposed Development

The 953 Mapleview Drive East residential subdivision is proposed to include the following:

- Block 193 – 100 apartment units;
- Block 192 – 120 apartment units;
- Block 191 – 16 townhouses and 261 – 332 apartment units; and
- Subdivision – 150 single detached units and 61 townhouses (north of the creek).

For a total of:

- 150 single detached units;
- 77 townhouses; and
- 481 – 552 apartment units.

As previously mentioned, the proposed development includes a right-in right-out access driveway onto Mapleview Drive East. The occupancy timeframe of the proposed development has been projected as follows:

- 2026 – 220 occupancies;
- 2031 - 559 occupancies (779 total).

The Draft Plan of the Subdivision including Block 192 is provided in **Appendix B**.

3.1 Traffic Generation

The traffic generation for Block 192 has been based on proxy site survey trip rates as utilized in the Hewitt's Transportation Study. The trip rates and estimated trip generation for the proposed development is illustrated below in **Table 3**.

Table 3 – Trips Rates and Estimated Trip Generation of Proposed Development - Block 192

Horizon Year	Size	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Proxy Site Trip Rate	-	0.14	0.34	0.48	0.41	0.25	0.66
Block 192	*120 units*	*17*	*41*	*58*	*49*	*30*	*79*
953 Mapleview Drive (Total)	779 units[1]	109	265	374	319	195	514

[1]For the purpose of this study, the highest proposed unit count has been considered

As shown, the subject site is estimated to generate a total of 374 AM and 514 PM peak hour trips during the 2031 horizon year.

Block 192 will attribute 58 AM and 79 PM peak hour trips to the total.

3.2 Traffic Assignment

The assignment of traffic volumes through the study area has been assumed to follow the same distribution as utilized in the Hewitt's Transportation Study for the subject lands. The distribution has been derived from the future (2031) PM peak synchro analysis for the Street 24 (Site Access) / Mapleview Drive East intersection (Excerpts are provided in **Appendix C**). The distribution is illustrated in **Table 4**.

Table 4 – Proposed Development Traffic Distribution

Travel Direction (to / from)	Percent of Total Traffic Generation			
	AM Peak Hour		PM Peak Hour	
	IN	OUT	IN	OUT
East via Mapleview Drive E	20%	6%	20%	6%
West via Mapleview Drive E	80%	94%	80%	94%
TOTAL	**100%**	**100%**	**100%**	**100%**

As the Site Access has been restricted to right-in right-out functionality only, it is anticipated that trips arriving from the east or departing to the west will utilize internal connections through adjacent subdivisions to the east, west, and south, as the lands are developed. These connections are shown on the Draft Plan and the Hewitt Secondary Plan excerpt and include Street 'E' to the west, Street 'A' (McAush Street) to the east and west, Street 'C' to the west, and future Street 'B' (Terry Fox Drive) to the east and southwest.

The site traffic assignment for the proposed development during the AM and PM peak hour is illustrated in and **Figure 3** and **4**.

Figure 3 – Site Traffic Assignment (2026)

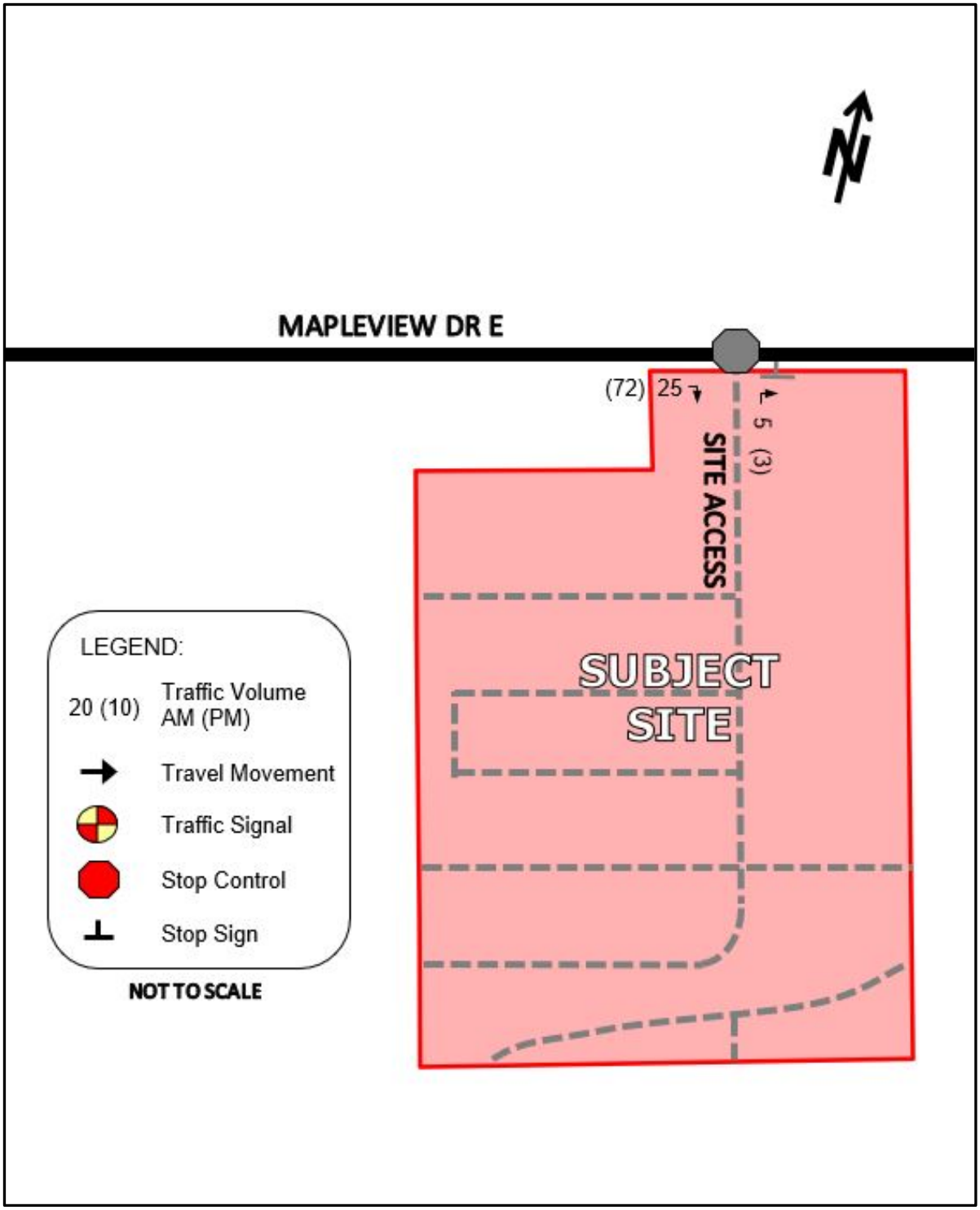
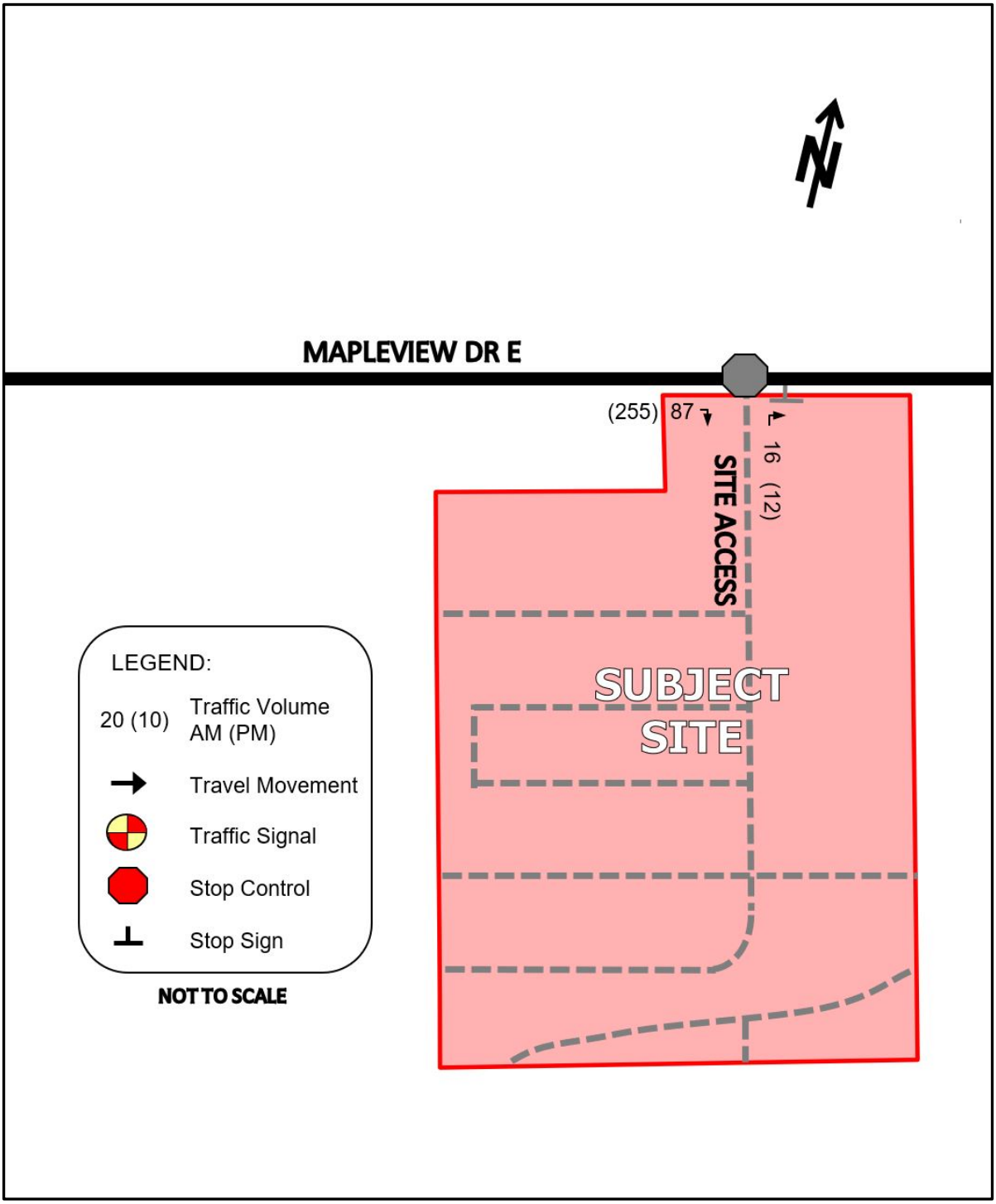


Figure 4 – Site Traffic Assignment (2031)



4 Horizon Year Traffic Volumes

Traffic volumes for the 2026 and 2031 horizon years were established based on the midblock EMME volumes (illustrated in **Table 1** and **Table 2**Table 2) in addition to the site generated traffic volumes.

Figure 5 and **Figure 6** illustrate the 2026 and 2031 peak hour traffic volumes within the study area.

Figure 5 – 2026 Horizon Year Traffic Volumes

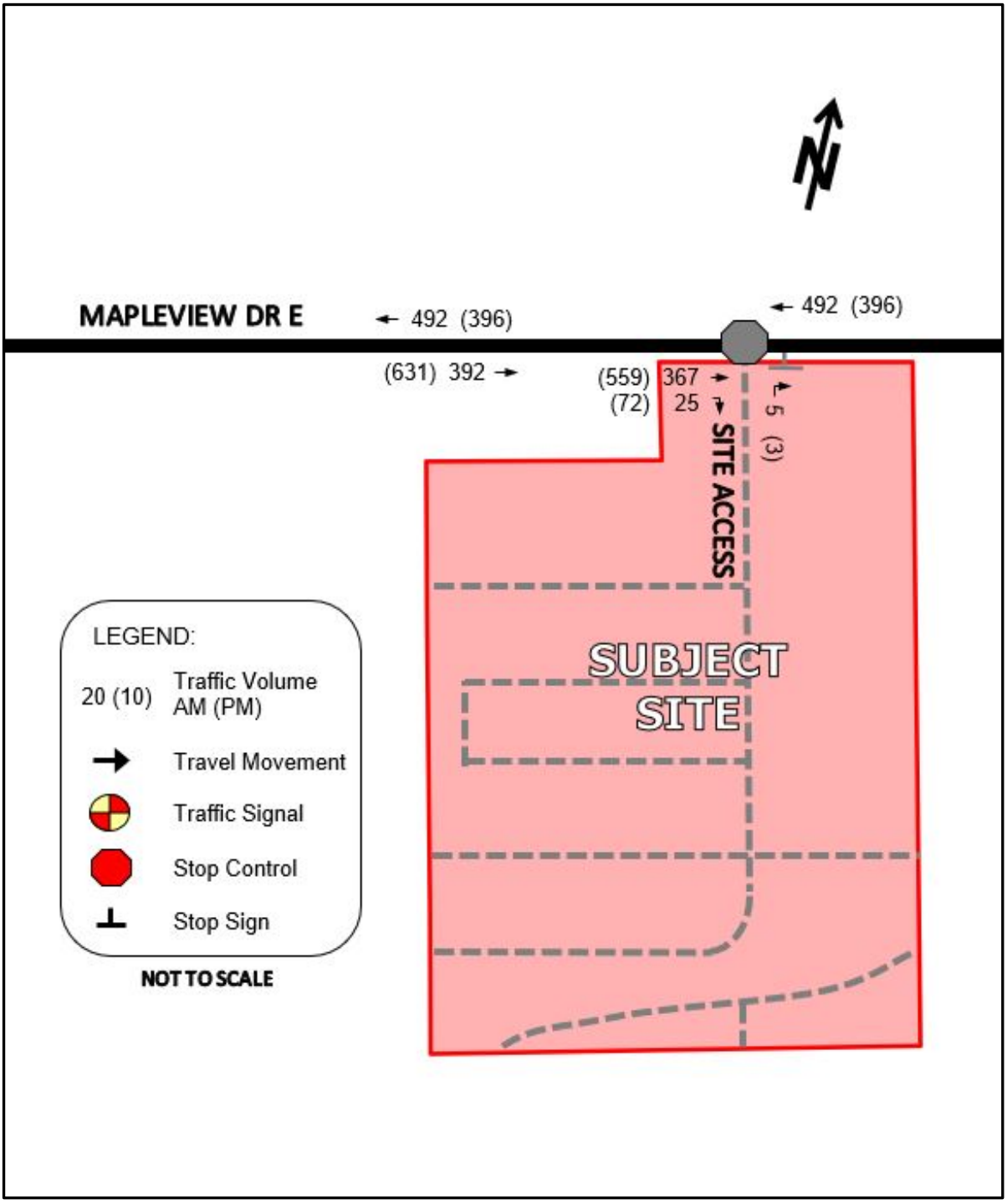
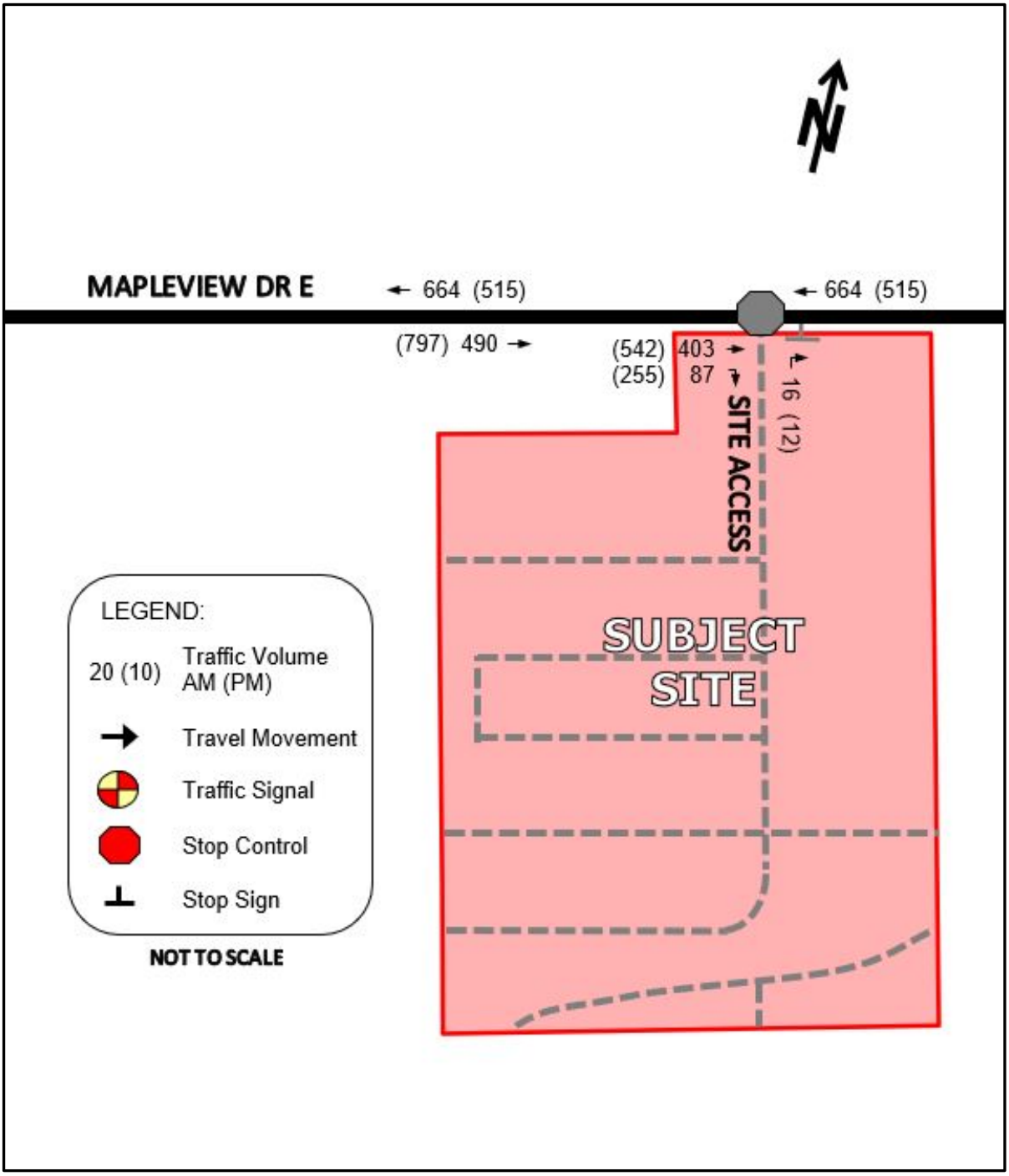


Figure 6 – 2031 Horizon Year Traffic Volumes



5 Future Operation Analysis

5.1 Introduction

Traffic operations within the study area were evaluated using the horizon year traffic volumes with the existing and future road configuration and traffic control. The intersection performance was measured using the traffic analysis software, Synchro 11, a deterministic model that employs Highway Capacity Manual and Intersection Capacity Utilization methodologies for analyzing intersection operations. These procedures are accepted by provincial and municipal agencies throughout North America.

Synchro 11 enables the study area to be graphically defined in terms of streets and intersections, along with their geometric and traffic control characteristics. The user is able to evaluate both signalized and unsignalized intersections in relation to each other, thus not only providing level of service for the individual intersections, but also enabling an assessment of the impact the various intersections in a network have on each other in terms of spacing, traffic congestion, delay, and queuing.

Individual turning movements with a volume-to-capacity [V/C] ratio of 0.85 or greater are considered to be critical movements and have been highlighted in the LOS tables.

The intersection operations were also evaluated in terms of the LOS. LOS is a common measure of the quality of performance at an intersection and is defined in terms of vehicular delay. This delay includes deceleration delay, queue move-up time, stopped delay, and acceleration delay. LOS is expressed on a scale of A through F, where LOS A represents very little delay (i.e. less than 10 seconds per vehicle) and LOS F represents very high delay (i.e. greater than 50 seconds per vehicle for a stop sign controlled intersection and greater than 80 seconds per vehicle for a signalized intersection).

The LOS criteria for signalized and stop sign-controlled intersections are shown in **Table 5**. A description of traffic performance characteristics is included for each LOS.

Table 5 – Level of Service Criteria for Intersections

LOS	LOS Description	Control Delay (seconds per vehicle)	
		Signalized Intersections	**Stop Controlled Intersections**
A	Very low delay; most vehicles do not stop (**Excellent**)	less than 10.0	less than 10.0
B	Higher delay; more vehicles stop (**Very Good**)	between 10.0 and 20.0	between 10.0 and 15.0
C	Higher level of congestion; number of vehicles stopping is significant, although many still pass through intersection without stopping **(Good**)	between 20.0 and 35.0	between 15.0 and 25.0
D	Congestion becomes noticeable; vehicles must sometimes wait through more than one red light; many vehicles stop (**Satisfactory**)	between 35.0 and 55.0	between 25.0 and 35.0
E	Vehicles must often wait through more than one red light; considered by many agencies to be the limit of **acceptable** delay	between 55.0 and 80.0	between 35.0 and 50.0
F	This level is considered to be unacceptable to most drivers; occurs when arrival flow rates exceed the capacity of the intersection (**Unacceptable**)	greater than 80.0	greater than 50.0

5.2 Horizon Year (2026) Intersection Operation

The results of the LOS analysis under 2026 horizon year traffic volumes during the AM and PM peak hour can be found below in **Table 6** (existing Mapleview Drive 2-lane cross-section) and **Table 7** (improved Mapleview Drive 3-lane cross-section). Stop control has been assumed at the Site Access egress movements. Detailed output of the Synchro analysis can be found in **Appendix D**.

Table 6 – 2026 LOS (2-lane cross-section)

Location (E-W Street / N-S Street)	Weekday AM Peak Hour			Weekday PM Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
Mapleview Dr E / Site Access	-	0.1	A	-	0.0	A
EB	0.25	0.0	A	0.40	0.0	A
WB	0.31	0.0	A	0.25	0.0	A
NB	0.01	10.7	B	0.01	12.7	B

Table 7 – 2026 LOS (3-lane cross-section)

Location (E-W Street / N-S Street)	Weekday AM Peak Hour			Weekday PM Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
Mapleview Dr E / Site Access	-	0.1	A	-	0.0	A
EB	0.25	0.0	A	0.40	0.0	A
WB	0.31	0.0	A	0.25	0.0	A
NB	0.01	10.7	B	0.01	12.7	B

The results of the LOS analysis indicate that the study intersection will operate within the typical design limits noted in Section 5.1 under both the existing (2-lane) configuration and improved (3-lane) configuration.

The criterion outlined in Section E.7 of the Ministry of Transportation [MTO] Geometric Design Supplement for Ontario Highways [GDSOH] (60vph minimum right turn volume warrant) has been used to assess whether an auxiliary right turn lane is required at the unsignalized study area intersection. The eastbound right-turn volume in the PM peak hour at the Mapleview Drive East / Site Access intersection exceeds the minimum volume threshold; however, this infrastructure improvement is not recommended based on the excellent LOS for this movement and the overall intersection operation under both the existing (2-lane) configuration and improved (3-lane) configuration.

No infrastructure improvements are recommended within the study area to facilitate the 2026 horizon year volumes.

5.3 Horizon Year (2031) Intersection Operation

The results of the LOS analysis under 2031 horizon year traffic volumes during the AM and PM peak hour can be found in **Table 8**. The improved Mapleview Drive 3-lane cross-section was utilized. Stop control has been assumed at the Site Access egress movements. Detailed output of the Synchro analysis can be found in **Appendix D**.

Table 8 – 2031 LOS (3-lane cross-section)

Location (E-W Street / N-S Street)	Weekday AM Peak Hour			Weekday PM Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
Mapleview Dr E / Site Access	-	0.2	A	-	0.1	A
EB	0.31	0.0	A	0.51	0.0	A
WB	0.42	0.0	A	0.33	0.0	A
NB	0.03	11.4	B	0.03	13.8	B

The results of the LOS analysis indicate that the study intersection will within the typical design limits noted in Section 5.1.

The eastbound right-turn volume in the PM peak hour at the Mapleview Drive East / Site Access intersection exceeds minimum threshold (as per Section E.7 of the MTO GDSOH); however, this infrastructure improvement is not recommended based on the excellent LOS for this movement and the overall intersection operation.

No infrastructure improvements are recommended within the study area to facilitate the 2031 horizon year volumes.

5.4 Sight Distance Review

A sight distance review has been provided in **Appendix B** to illustrate that the minimum sight stopping distance (85 metres for 60km/h design speed) is provided at the Site Access.

5.5 Swept Path Analysis

A swept path analysis has been provided in **Appendix E** to illustrate that the following vehicles can access the site as intended:

- Passenger Vehicle (TAC P);
- Fire Truck; and
- City of Barrie Recycling Truck.

6 Parking Study

6.1 Scope

The purpose of this analysis is to estimate the minimum parking supply required to adequately service the proposed development of Block 192. The proposed Site Plan includes a total parking supply of 147 parking spaces for the 120 residential units.

6.2 Existing Study Area Parking Infrastructure

On-street parking is currently permitted on both sides of Mapleview Drive East, along the frontage of the subject site. In the current condition, there is a small gravel shoulder on the north and south side of Mapleview Drive East, which would not support on-street parking without disrupting the flow of traffic. In our experience working in the area, on-street parking is not anticipated on Mapleview Drive East. Although not anticipated, in the event that on-street parking becomes an issue on Mapleview Drive

East, the City may consider installing no-parking signage to prohibit parking in this area. It is our understanding that on-street parking will be prohibited in this area following the reconstruction of Mapleview Drive East to a 5-lane cross-section, consistent with the City's existing standards.

Dallaire Street, when constructed, will be a municipal local road. The City standard for a local road permits on-street parking on one side of the road.

It is noted that the on-street parking is subject to the City's Parking By-law (2007-209) which prohibits on-street parking between 12:01 and 07:00, from December 1st each year until March 31st in the following year.

There are no existing private parking lots in the area surrounding Block 192.

6.3 Municipal By-law

The City of Barrie Zoning By-Law 2009-141 [ZBL] provides parking requirements for a variety of building types and land uses. **Table 9** summarizes the parking requirement, according to the ZBL, for the proposed development of Block 192.

Table 9 – Zoning By-law Requirement Parking Calculation

Category	Zoning By-Law Section	Parking Standard	Units	Parking		
				Required	Provided	Net
Residential dwelling(s)	4.6.1	Minimum of 1.5 spaces per dwelling unit	120 units	180 spaces	147 spaces	-33 spaces
Bicycle Parking	14.4.2	0.2 spaces per unit	120 units	24 spaces	36 spaces	+12 spaces
Accessible Parking	4.6.4	1 space plus 3% of required spaces	180 spaces	Type A: 3 spaces Type B: 3 spaces	Type A: 3 spaces Type B: 3 spaces	-

The proposed vehicle parking supply falls below the calculated requirement by 33 spaces. The proposed bicycle parking exceeds the minimum parking requirement by 12 spaces.

6.4 Proxy Counts – Residential Visitor Parking

6.4.1 Proxy Site Locations – Residential Visitor Parking

To estimate the residential visitor parking demand for the proposed community, two proxy parking surveys have been commissioned by JD Engineering. The proxy sites used in this study are townhouse developments in Barrie, which will provide a conservative estimate of the visitor parking demand. Transit service at the proxy sites is better than the existing transit service at the Subject Site; however, based on transit utilization rates in Barrie, the impact of transit service on residential visitor parking is not anticipated to be significant. Both proxy sites are similar in scale to the proposed development. One proxy site was constructed within the last 5 years and the other proxy site was constructed over 20 years ago. The selected proxy survey locations are as follows:

1) 369 Essa Road, Barrie [369 Essa]; and
2) 28 Donald Street, Barrie [28 Donald].

The proxy surveys at 369 Essa and 28 Donald were completed at the following times:

1) Friday December 3rd, 2021 from 14:00 to 23:00; and
2) Saturday December 4th, 2021 from 10:00 to 23:00.

The proxy parking counts were completed at 30-minute intervals during the above-noted periods.

No on-street parking was observed on Essa Road, in the area, during the proxy surveys.
On-street parking is permitted on Donald Street, adjacent to 28 Donald; however, as illustrated in the proxy parking counts, the dedicated visitor parking areas maintain additional capacity throughout the survey. Consequently, there would be no incentive for residential visitors to park on Donald Street. As such, the parking data collected represents the full visitor parking demand.

Table 10 summarizes the building and parking statistics at each of the proxy sites.

Table 10 – Residential Visitor Proxy Survey Site Statistics

Proxy Site	Number of Units	Visitor Parking Supply (At-Grade)
369 Essa	104	14
28 Donald	82	27

6.4.2 Proxy Survey Data – Residential Visitor Parking

Table 11 summarizes the visitor parking survey data for the proxy sites, detailed results are provided in **Appendix C**.

Table 11 – Residential Visitor Proxy Survey Site Data

Proxy Site	Number of Units	Visitor Parking			
		Peak Period	Supply (spaces)	Demand (spaces)	Demand Rate (spaces/unit)
369 Essa	104	Friday, 21:00 Saturday, 19:30 Saturday, 20:30 Saturday, 21:00	14	12	0.15
28 Donald	82	Friday, 18:30	15	25	0.18
AVERAGE					**0.17**

6.5 Analysis – Residential Visitor Parking

The proxy survey at 369 Essa found that the standard visitor parking spaces were fully occupied for a three-hour period during the Friday survey and for a total of two and a half hours during the Saturday survey. It is also noted that some vehicles were parked illegally, in areas along the driveways that were not designated as visitor parking. The survey data also shows that illegal parking occurred at times when there were visitor parking spaces available. This suggests that the illegal parking was not directly related to a shortage of visitor parking spaces. Consequently, we have assumed that the visitor parking demand was not constrained by the visitor parking supply.

Based on the parking data collected at the proxy sites, 27 visitor parking spaces (0.20 spaces per unit) would provide sufficient parking supply to accommodate the peak visitor parking demand from the proposed 120 residential units. The visitor parking generated by the proposed development of Block 192 is not anticipated to impact the future on-street parking that would be available on Dallaire Street.

6.6 Analysis – Resident Parking

In the case of residential visitor parking, when the visitor parking demand exceeds the visitor parking supply, the additional parking demand may result in unauthorized parking in nearby parking lots or undesignated areas. Consequently, providing a conservative visitor parking supply as outlined in Section 6.5, will ensure overflow visitor parking issues do not occur. Allocation of resident parking is different than visitor parking. Lowering the resident parking supply, in conjunction with clear communication during sales / rental process and ongoing parking enforcement, can increase development efficiency and provide transportation demand management.

After removing the parking supply required for visitor parking (27 spaces), the remaining parking supply available for residential units (127 spaces), results in a parking supply rate of 1.06 spaces per unit. This is slightly higher than the minimum parking requirement as identified in the ZBL for a residential development in the Neighbourhood Mixed-use Zone (NMU). Furthermore, the NMU rate is inclusive of visitor parking. Consequently, the proposed residential parking rate of 1.06 spaces per unit is appropriate for the intended use.

6.7 Parking Recommendation

Based on our review of the proxy parking data and the minimum parking requirement for residential development in the Neighbourhood Mixed-use Zone, the proposed parking supply will accommodate the anticipated parking demand generated by the proposed development of Block 192. The recommended parking supply is summarized in **Table 12**.

Table 12 – Recommended Parking Supply

Category	Size	Parking Rate	Parking
Resident Parking	120 units	1.06 spaces per dwelling unit	127 spaces
Resident Visitor Parking	120 units	0.20 spaces per unit	27 spaces
Total Parking			147 spaces
Resident Bicycle Parking	120 units	0.3 spaces per unit	36 spaces
Accessibility Parking	180 spaces	1 space plus 3% of required spaces	Type A: 2 spaces Type B: 2 spaces

7 Construction Staging

A construction traffic management plan was completed to identify the proposed management of traffic related to parking of trades people, delivery of construction material, maintenance of adjacent property access, pedestrian movements and City infrastructure. A Construction Traffic Management Plan is provided in **Appendix F**.

Construction access for development within the 953 Mapleview Drive East subdivision will be provided via the Site Access intersection on Mapleview Drive East. The proposed Site Access will be the primary access throughout the entire construction period (i.e., demolition, site preparation, servicing and erection etc.). Construction access will be limited to right-in / right-out movements on Mapleview Drive East.

Construction access onto Block 192 will be provided via a dedicated gravel construction driveway onto the right-of-way for the proposed north / south local road within the 953 Mapleview Drive East subdivision (Dallaire Street).

Deliveries and trades parking associated with the construction of Block 192 can be accommodated within the southeast area of Block 191, which will be developed after Block 192. A gravel parking area and gravel driveway will be constructed to provide access into the Street 'E' right-of-way which connects onto Dallaire Street and the Site Access onto Mapleview Drive East.

Construction traffic and parking will not impede or prevent access to the neighboring lots. Construction work will occur within the property limits and outside of the boulevard. Pedestrian movements adjacent to the Subject Site will be unaffected by the construction of the proposed development. No sidewalk closures are expected.

Construction activities within the site (including start-up and warm-up of equipment) will only occur between 07:00 and 19:00 on weekdays and Saturdays, per City of Barrie by-law. No construction activities will occur outside the above-noted periods without approval from the City.

Signage shall be posted at all work zone entrances as required, notifying visitors that check-in at the site office is mandatory. Signage will also be provided to identify the area as a 'construction site', requiring all visitors be equipped with personal protection equipment suitable for a construction zone (hard hat, footwear, high visibility gear). Signage will also be provided informing that access to the site is limited to authorized personnel only.

8 Summary

Mapleview South (Innisfil) Ltd. retained **JD Engineering** to prepare this traffic brief in support of the residential subdivision located within the Hewitt's Secondary Planning Area in the City of Barrie. The proposed Draft Plan of Subdivision is shown in **Appendix B**. This chapter summarizes the conclusions and recommendations from the study.

1. Block 192 includes a total of 120 medium-density residential units.
2. As shown, the subject site is estimated to generate a total of 374 AM and 514 PM peak hour trips during the 2031 horizon year. Block 192 will attribute 58 AM and 79 PM peak hour trips to the total.
3. The 2026 and 2031 horizon year volumes were developed based on the City's Emme model volumes and anticipated build-out of the subject site.
4. An intersection operation and turn lane analysis was completed under the 2026 and 2031 horizon year traffic volumes with the anticipated developments operational at the study area intersections. No infrastructure improvements are recommended.
5. In summary, the proposed development will not cause any operational issues and will not add significant delay or congestion to the local roadway network.

Appendix A –
Hewitt Transportation Study Excerpts &
953 Mapleview Drive East - Draft Plan of Subdivision

Hewitt's Secondary Plan
Overall Development Plan

SCALE = 1:1600 (A0)

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS

Date Issued:	MARCH 26, 2020
Checked By:	RD
Project No.:	EAS-11118
Drawn By:	[illegible]
Drawing Name:	EAS-11118-DevPlan-20-03-07.dwg

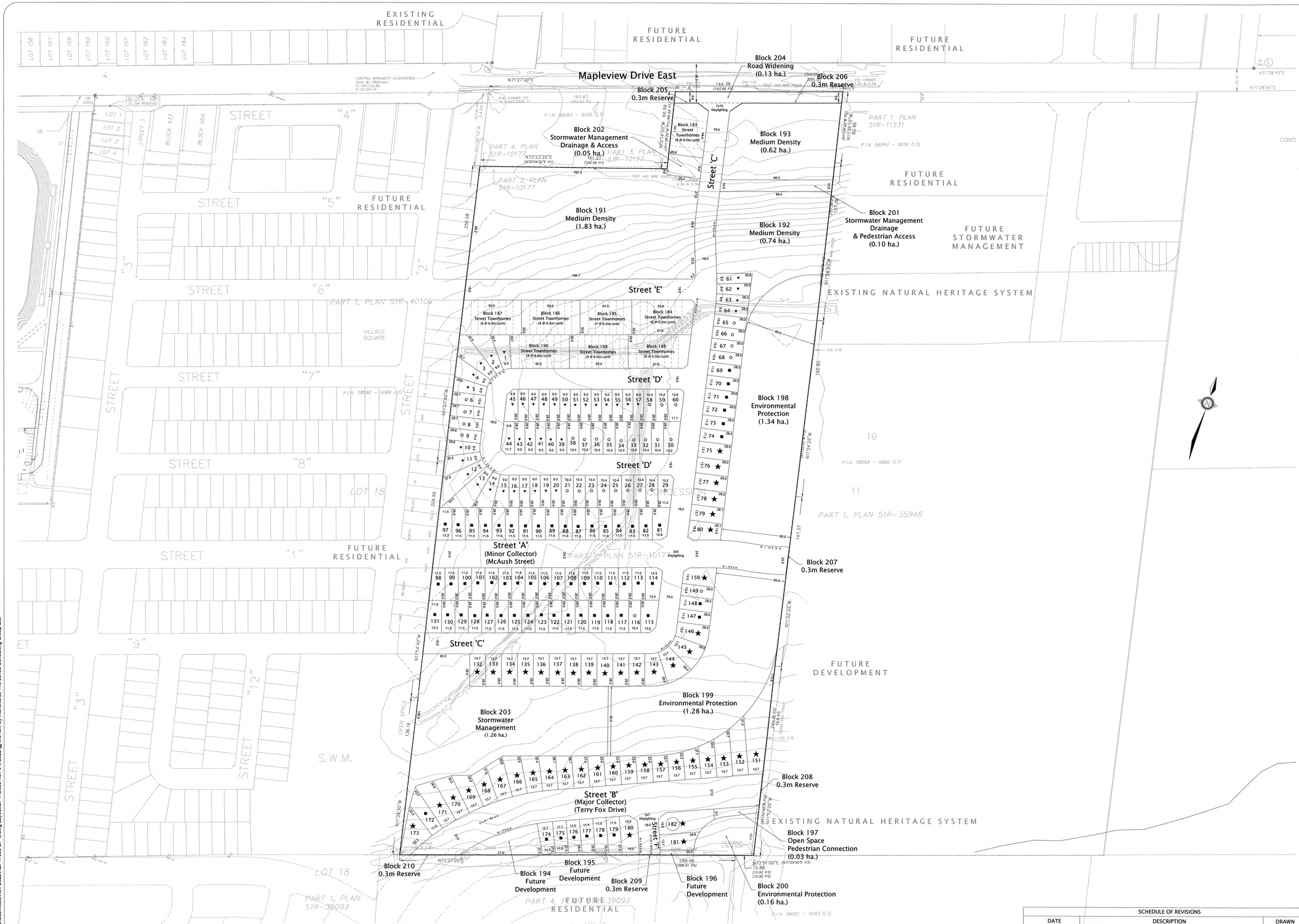
- Subject Lands
- City of Barrie Settlement Area Boundary (2031)
- Natural Heritage System including Buffer
- Participating Landowners
- Non-Participating Landowners
- Adjusted based on Draft Plan Approvals (#)

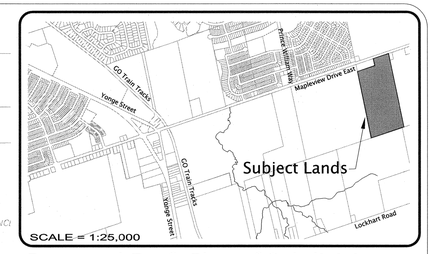
SWM – Stormwater Management Pond
VS – Village Square
PARK – Parkland
SES – Separate Elementary School
PES – Public Elementary School
SS – Secondary School
MU – Mixed Use Block
M/H RES – Medium/High Density Residential

KEY PLAN 1:40,000

Subject Site

BIG BAY POINT ROAD
MAPLEVIEW DRIVE EAST
MADELAINE DRIVE
YONGE STREET
20TH SIDEROAD
LOCKHART ROAD
NATURAL HERITAGE SYSTEM
RECREATION CENTRE COMMUNITY PARK





Proposed Draft Plan of Subdivision

Part of Lot 19, Concession 11
Geographic Township of Innisfil,
Now in the
City of Barrie 2022

OWNER'S CERTIFICATE

I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF BARRIE FOR APPROVAL.

NOV. 8/22 — DATE
MAPLEVIEW SOUTH (INNISFIL) LTD.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

NOV. 4, 2022 — DATE
RUDY MAK, O.L.S.

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

a) SHOWN ON DRAFT PLAN
b) SHOWN ON DRAFT PLAN
c) SHOWN ON KEY PLAN
d) RESIDENTIAL, OPEN SPACE, STORMWATER MANAGEMENT, & ENVIRONMENTAL PROTECTION
e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT PLAN
h) MUNICIPAL PIPED WATER TO BE PROVIDED
i) SANDY/CLAY LOAM
j) SHOWN ON DRAFT PLAN
k) ALL MUNICIPAL SERVICES TO BE PROVIDED
l) SHOWN ON DRAFT PLAN

STATISTICS	Area (ha.)	Units
★ 13.7 m Singles		47 units
■ 11.5 m Singles		65 units
○ 10.4 m Singles		31 units
▾ 9.0 m Singles (LOTS 1 - 182)		39 units
SUB TOTAL	6.33 ha.	182 units
Street Townhomes (6.0m) (BLOCKS 183 - 190)	1.18 ha.	61 units
Medium Density Residential (BLOCKS 191 - 193 @ 70 uph)	3.19 ha.	223 units
Future Lots & Blocks (BLOCKS 194 - 196)	0.15 ha.	4 units
Open Space/Pedestrian Connection (BLOCK 197)	0.03 ha.	
Environmental Protection (BLOCKS 198 - 200)	2.78 ha.	
Stormwater Management & Drainage (BLOCKS 201 - 203)	1.41 ha.	
Widening & Reserve (BLOCKS 204 - 210)	0.15 ha.	
Roads (MINOR COLLECTOR, STREET 'A') (McAUSH STREET) (MAJOR COLLECTOR, STEET 'B') (TERRY FOX DRIVE) (LOCAL STREETS 'C' - 'F')	3.81 ha.	
TOTAL	19.03 ha.	470 units

0 10 50 100M
SCALE 1 : 1500 (A1)

MAPLEVIEW SOUTH (INNSIFIL) LTD.
953 MAPLEVIEW DRIVE, BARRIE, ONTARIO

PROPOSED DRAFT PLAN OF SUBDIVISION

SCHEDULE OF REVISIONS		
DATE	DESCRIPTION	DRAWN
FEB. 25, 2021	CHANGES AS PER ENG COMMENTS/SWM POND REVISION	m.c.r.
MARCH 5, 2021	REVISION TO LOTS 172 & 173	m.c.r.
APRIL 1, 2021	MINOR CHANGES TO TITLE BLOCK ONLY	m.c.r.
MARCH 10, 2022	CHANGES PER CITY COMMENTS	m.c.r.
MARCH 16, 2022	REVIEW OF RIGHT OF WAY WIDTHS AND DAYLIGHTING	m.c.r.
MARCH 21, 2022	UPDATED ADJACENT LANDS WITH CURRENT DP LINEWORK	m.c.r.
MARCH 22, 2022	CHANGES AS PER CITY COMMENTS	m.c.r.
MARCH 30, 2022	CHANGES AS PER CITY COMMENTS	m.c.r.

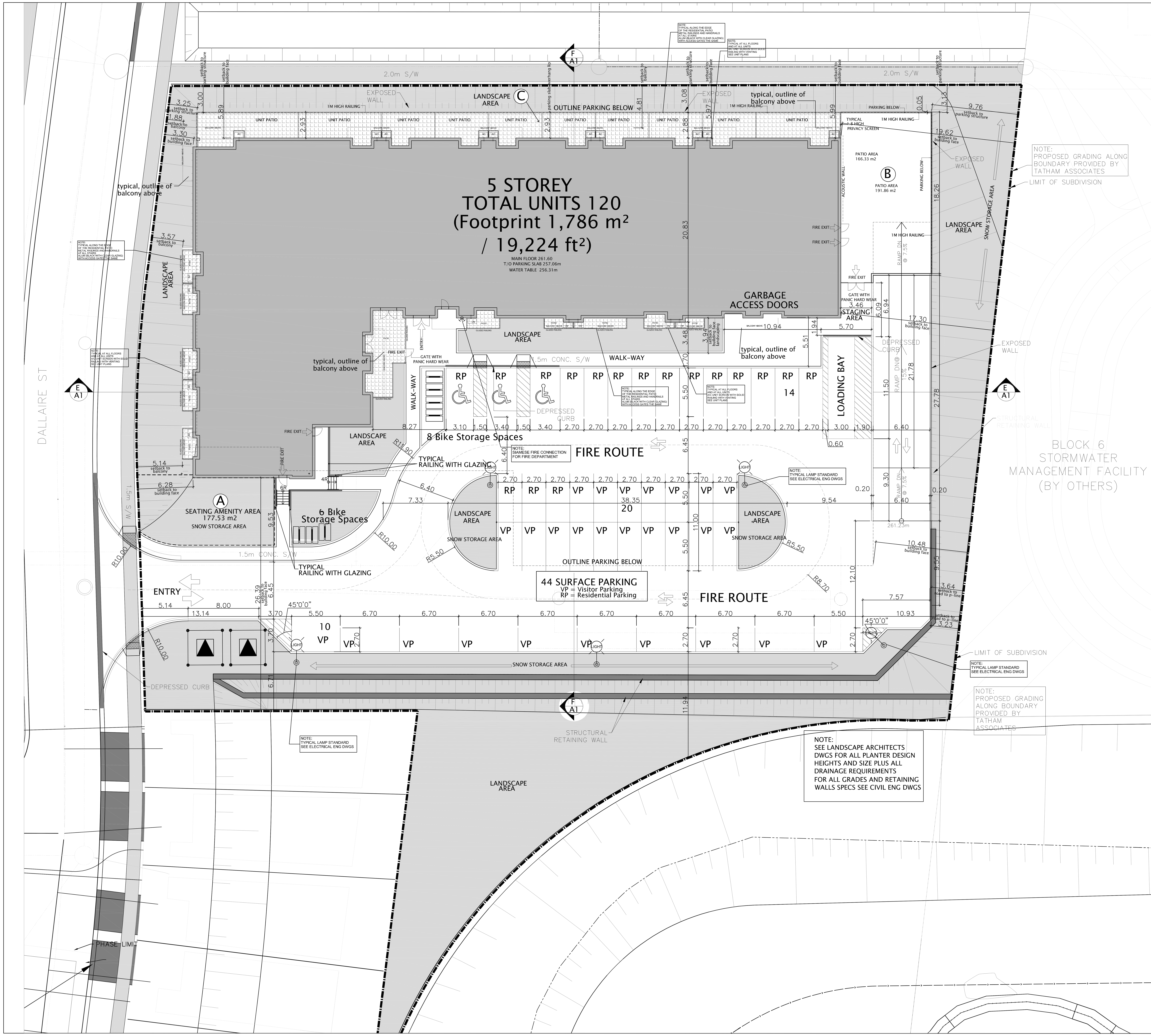
Raymond J. Duhamel — REGISTERED PROFESSIONAL PLANNER — R.P.P.

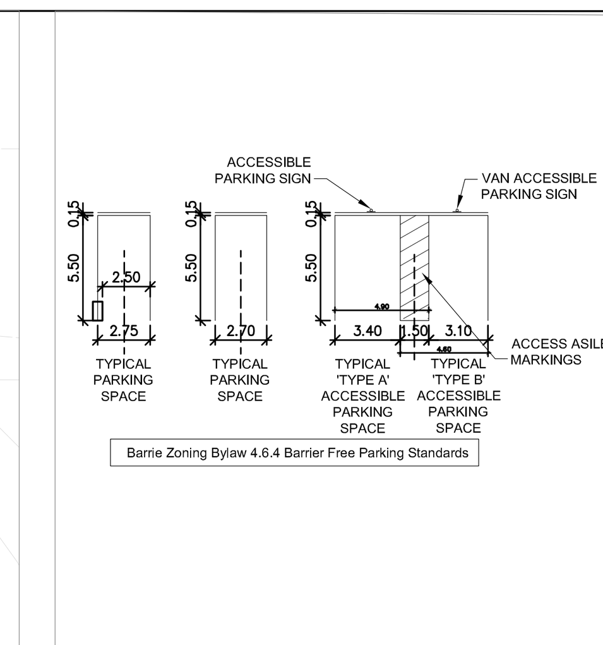
Date Issued:	DEC. 13, 2019
Checked By:	RD
Project No.:	REI-17055
Drawn By:	m.c.r.
Drawing Name:	REI-17055-DP-8.dwg

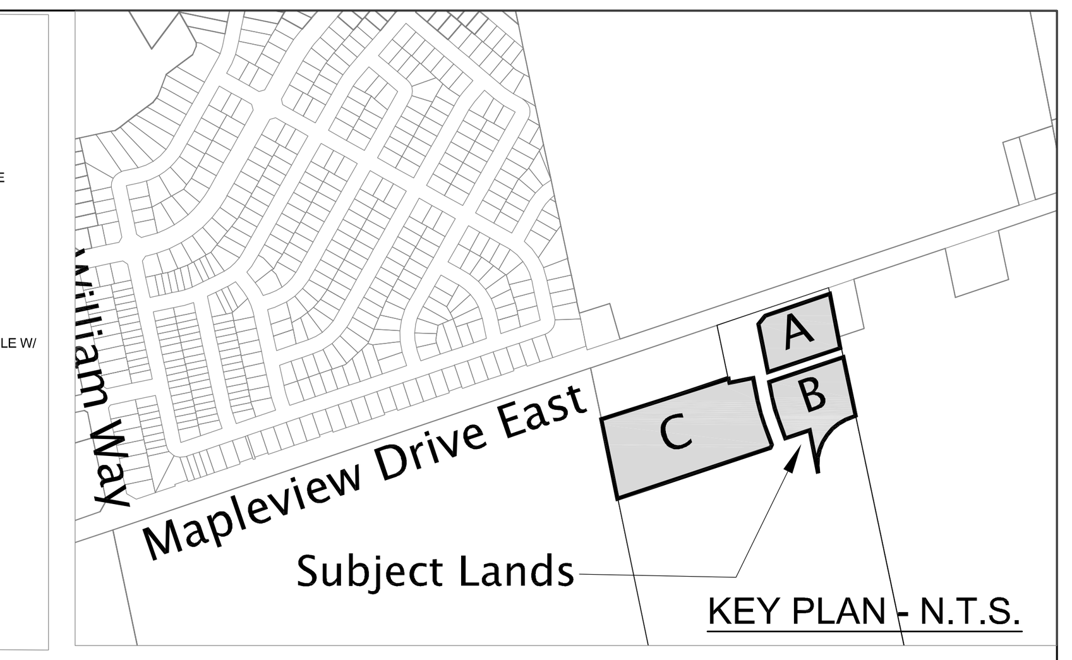
JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Drive East, Unit 1, Barrie, Ontario, L4N 0W5
Phone: 705-734-2538 Fax: 705-734-1056
www.jonesconsulting.com

MAPLEVIEW SOUTH (INNISFIL) LTD.
953 MAPLEVIEW DRIVE BARRIE, ONTARIO

Appendix B –
Block 192 - Site Plan







Block 'B' Details

B BUILDING FOOT PRINT
(3.2.2.43A GROUP C)

ALLOWABLE	1,800 m2
PROPOSED	1,792 m2

Unit Count:

BLOCK 'B' Apartment Building (5 Storey)	120 units
Total	120 units

	REQUIRED	PROPOSED
Site Plan Area	-	0.74 ha.(7,363.63m2)
Lot Frontage	24.0 m	70.9 m
Front Yard	3.0 m	3.28 m
Interior Side Yard	5.0 m	5.89 m
Exterior Side Yard	1.8 m	26.39 m
Rear Yard	5.0 m	17.32 m
Lot Coverage	max 50 % (0.36 ha.)	24 % (0.18 ha.)
Accessory Structures	max 10 % (0.07 ha.)	0 % (0.00 ha.)
Landscape Open Space	min. 25 % (0.18 ha.)	48 % (0.34 ha.)
Paved Area	max 35 %	28 % (0.21 ha.)
Density Index	min 120 max 300	162.16
Floor Space Index	min 0.5 max 2.5	1.22

Building Block B

. GFA	8,930 m2
. Height in Stories	5
Units	120

Parking Calculations	Required	Provided
Required Parking (120 x 1.0)	120 spaces	120 spaces
Required Visitor Parking (120 x 0.5=60)	60 spaces	
Proposed Visitor Parking (120 x 0.2=24)		27 spaces
Total Required	180 spaces	147 spaces

Parking Breakdown	
Typical Surface Spaces	41 spaces
Surface Barrier Free Spaces	3 spaces
Underground Barrier Free Spaces	3 spaces
Typical Underground Spaces	100 spaces
Total Provided	147 spaces

Barrie Zoning Bylaw 4.6.4 Barrier Free Parking
Barrier Free spaces calculated using Accessibility Parking for Barrie Ont.
Required over 100 spaces 1 space plus 3% of the required parking spaces
3% of 147 =4.41 (5) plus 1 = 6 (6 required, provided 6)
(Type A - 3.4 x 1.5 - 3 spaces)
(Type B - 3.1 x 1.5 - 3 spaces)

Bicycle Rack Storage (.2 x 120)	24 Required	22 Secure Storage Provided 14 Surface Bike Racks Provided
Total		36 Bikes

Required Outdoor Amenity Area (10m²/unit-10x120) 1200 m²
Provided Amenity Breakdown For Condo Building

Provided Outdoor Amenity

Garden Amenity At Entry, A	177.53 m²
Patio area on east side , B	191.86 m²
Patio area over parking structure at North side, C	232.70 m²
Patio area at ground floor Units at East and South	87.00 m²
Balcony area at typical floors (157.68 X 4 floors)	630.72 m²
Total Outdoor Amenity	1319.81 m²

Provided Shared Indoor Amenity

lounge/meeting rooms Amenity Plus public Washrooms	158.52 m²
Total In door Amenity	158.52 m²

Fire Route

Unit type and area per floor — AFFORDABLE UNIT *

Unit	Area	Unit Type	Main floor	2nd floor	3rd floor	4th floor	5th floor	
A	55m	1 bed 1 bath	7	7	7	7	7	35
B *	34m	Bachelor	2	2	2	2	2	10
C *	49m	1 bed/1 bath	1	1	1	1	1	5
D	55m	1 bed/1 bath/den	1	1	1	1	1	5
E	50m	1 bed/1 bath	3	4	4	4	4	19
E+	52m	1 bed/1 bath	1	1	1	1	1	5
F	58m	1 bed/1 bath	1	1	1	1	1	5
G	63m	1 bed/1 bath/den		2	2	2	2	8
H	86m	2 bed/2 bath	2	2	2	2	2	10
I	98m	2 bed/2 bath/den		1	1	1	1	4
J	70m	2 bed/2 bath		1	1	1	1	4
K	106m	3 bed/2 bath	1	1	1	1	1	5
L	80m	2 bed/2 bath	1	1	1	1	1	5
			20	25	25	25	25	120

Total Units	120
Affordable Units *	15

No.	Description	Date	Rev.
15	ISSUED FOR PRE-CONSULTATION MEETING	JUN 14, 2024	
14	ISSUED FOR PRE-CONSULTATION MEETING	May 06, 2024	
13	ISSUED FOR PRE-CONSULTATION MEETING	April 15, 2024	
12	ISSUED FOR PRE-CONSULTATION MEETING	April 12, 2024	
11	ISSUED FOR PRE-CONSULTATION MEETING	April 11, 2024	
12	ISSUED FOR PRE-CONSULTATION MEETING	April 05, 2024	
11	ISSUED FOR PRE-CONSULTATION MEETING	Mar 28, 2024	
10	ISSUED FOR PRE-CONSULTATION MEETING	Mar 19, 2024	
9	ISSUED FOR PRE-CONSULTATION MEETING	Feb 26, 2024	
8	ISSUED FOR PRE-CONSULTATION MEETING	Feb 07, 2024	
7	ISSUED FOR PRE-CONSULTATION MEETING	Nov 27, 2023	
6	ISSUED FOR PRE-CONSULTATION MEETING	Nov 16, 2023	
5	ISSUED FOR PRE-CONSULTATION MEETING	Oct 24, 2023	
4	ISSUED FOR PRE-CONSULTATION MEETING	July 18, 2023	
3	ISSUED FOR CLIENT AND CONSULTANT REVIEW	May 24, 2023	
2	ISSUED FOR CLIENT AND CONSULTANT REVIEW	Aril 20, 2023	
1	ISSUED FOR CLIENT AND CONSULTANT REVIEW	March 30, 2023	SA

CLIENT: MAPLEVIEW SOUTH (INNISFIL) LTD.

953 MAPLEVIEW DRIVE-BLOCK-192
SITE PLAN 120 UNITS

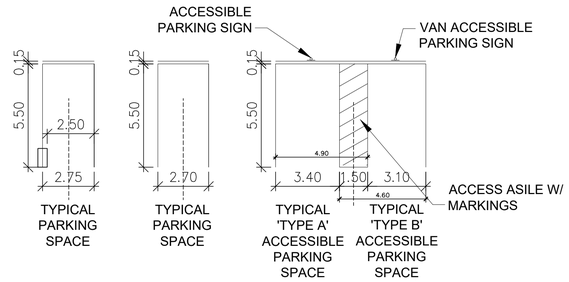
ELEVATION: | Drawing No. A-101

TOTAL AREA: | DATE ISSUED: March 30,2023

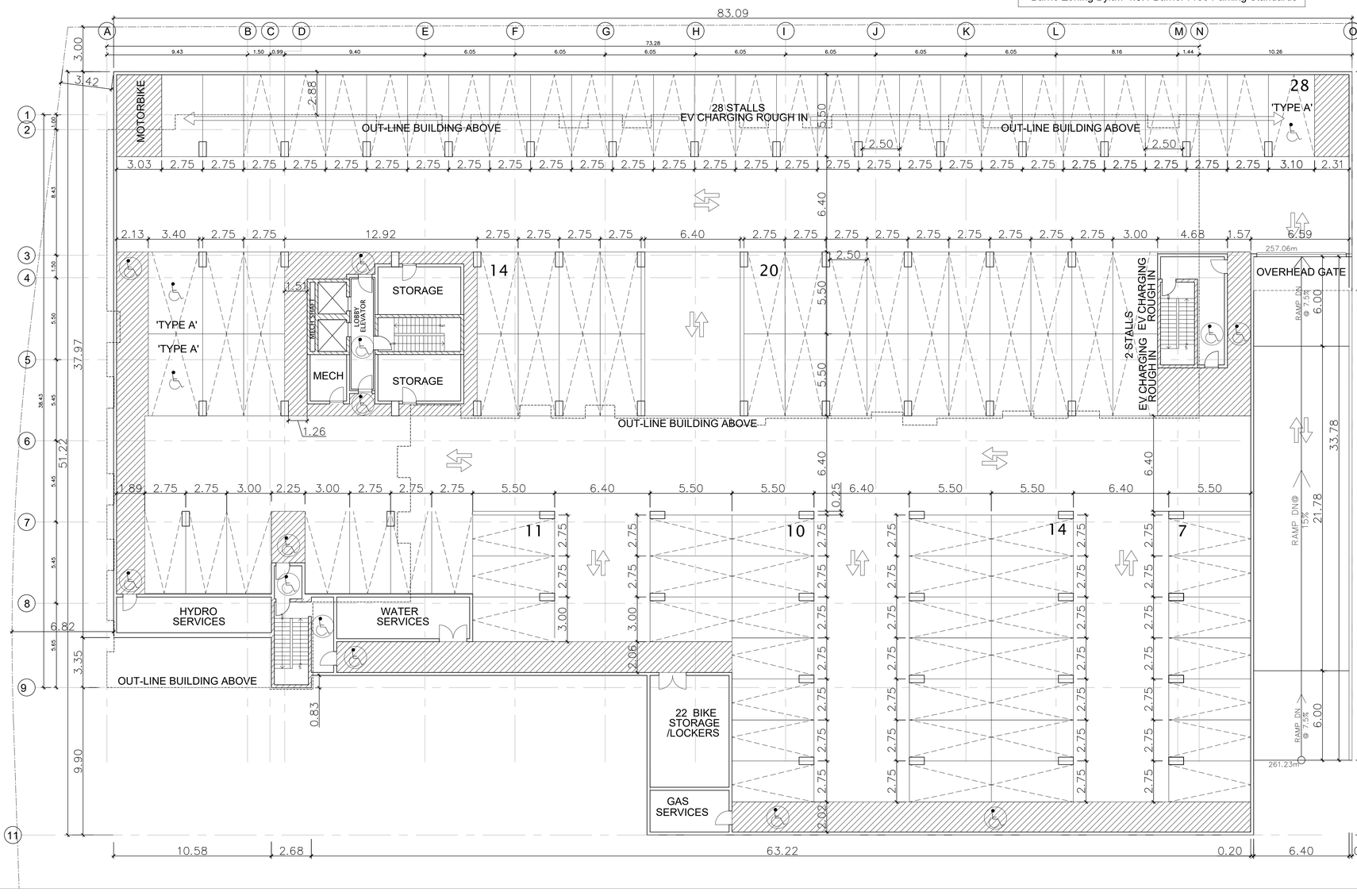
PROJECT #:	MARKETING NAME:
2023-05	-
SCALE: 1:200	MUNICIPALITY: City of Barrie

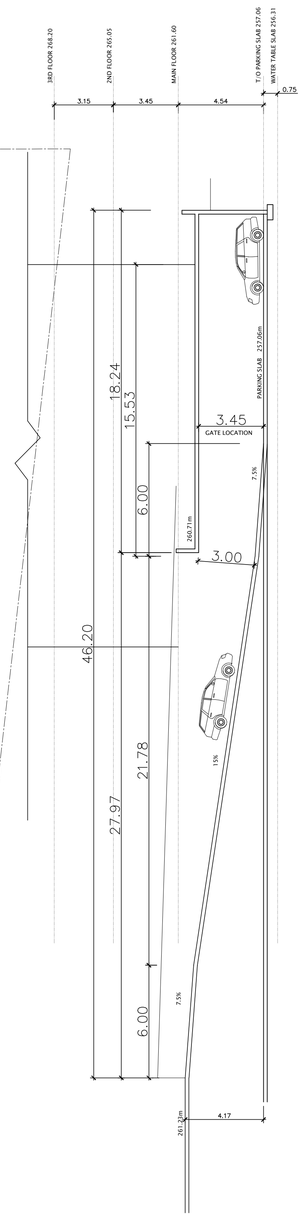
S&C ARCHITECTS INC.
T:(416)848-0991 F:(416)860-6101
INFO@SCARCHITECTS.CA
60 RANDALL DRIVE SUITE 10
AJAX, ONTARIO L1S 6L3

BELOW GRADE PARKING
103 parking stall
AREA 3,607 m2
AREA 38,825 sq,ft.



Barrie Zoning Bylaw 4.6.4 Barrier Free Parking Standards





No.	Description	Date	Rev.
13	ISSUED FOR PRE-CONSULTATION MEETING	May 06, 2024	
12	ISSUED FOR PRE-CONSULTATION MEETING	April 12, 2023	
11	ISSUED FOR PRE-CONSULTATION MEETING	April 11, 2023	
10	ISSUED FOR PRE-CONSULTATION MEETING	April 05, 2023	
9	ISSUED FOR PRE-CONSULTATION MEETING	Mar 23, 2023	
8	ISSUED FOR PRE-CONSULTATION MEETING	Mar 19, 2023	
7	ISSUED FOR PRE-CONSULTATION MEETING	Feb 26, 2023	
6	ISSUED FOR PRE-CONSULTATION MEETING	Feb 07, 2023	
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2	ISSUED FOR CLIENT AND CONSULTANT REVIEW	Apr 20, 2023	
1	ISSUED FOR CLIENT AND CONSULTANT REVIEW	March 30, 2023	SA

maple glen IN BARRIE

CLIENT: MAPLEVIEW SOUTH (INNISFIL) LTD.

953 MAPLEVIEW DRIVE-BLOCK-192
CONCEPTUAL
UNDERGROUND PARKING 120 UNITS

ELEVATION:

Drawing No. A-102

TOTAL AREA:

DATE ISSUED: March 30,2023

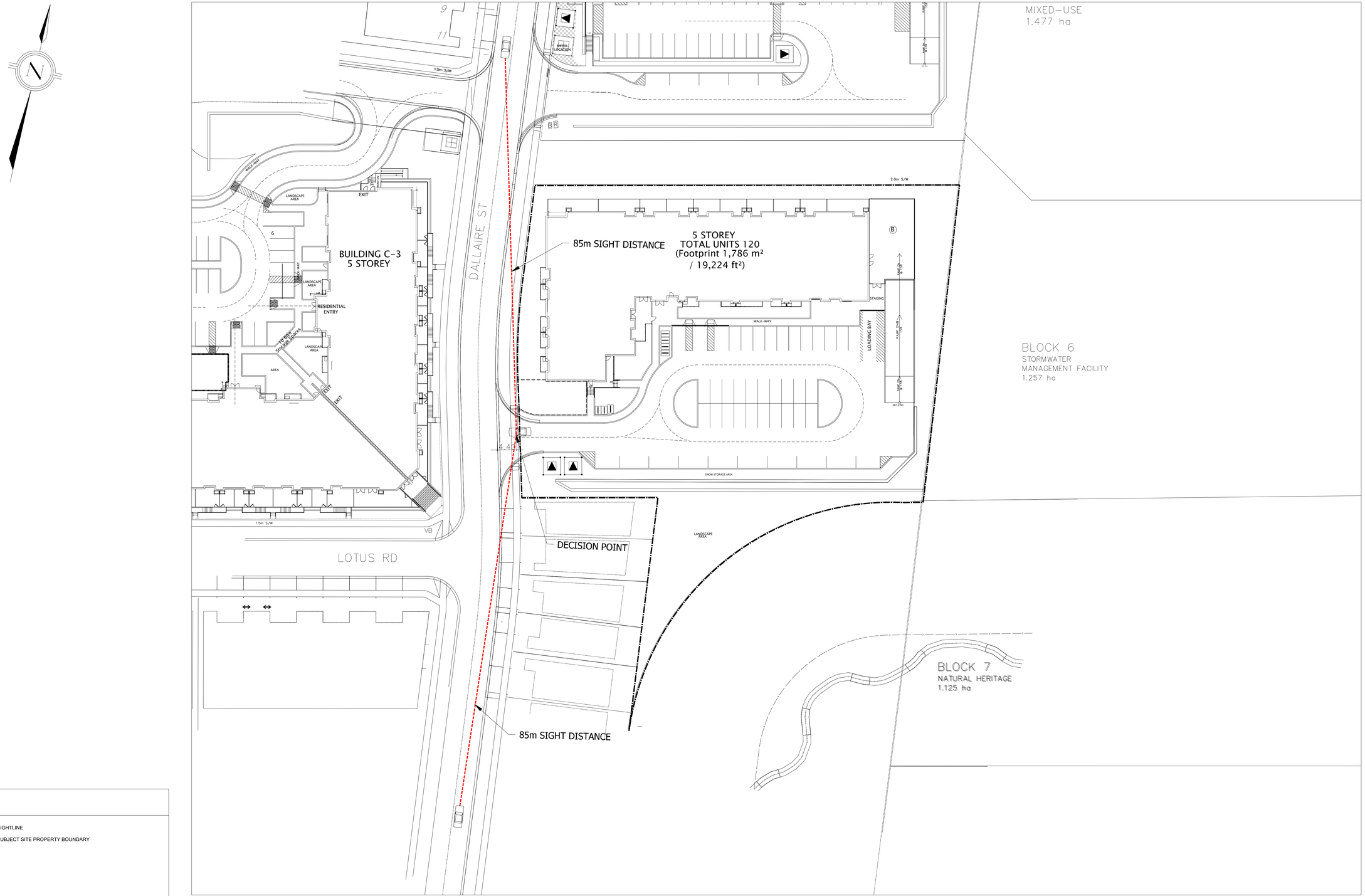
PROJECT #: 2023-05

MARKETING NAME: -

SCALE: 1:150

MUNICIPALITY: City of Barrie

S&C ARCHITECTS INC.
T:(416)848-0991 F:(416)960-6101
INFO@SCARCHITECTS.CA
60 RANDALL DRIVE SUITE 10
AJAX, ONTARIO L1S 6L3



LEGEND

- SIGHTLINE
- SUBJECT SITE PROPERTY BOUNDARY

GENERAL NOTES
1. THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. THE DRAWINGS ARE THE PROPERTY OF JD ENGINEERING AND MUST BE RETURNED ON COMPLETION OF THE PROJECT.
4. BASE DRAWING PROVIDED BY S&C ARCHITECTS ON JUNE 24TH 2024.

NO.	DATE	APPROVED	REVISIONS
1.	JUNE 2024	JN	FIRST SUBMISSION

JD Northcote Engineering Inc.
Phone: 705.725.4035
86 Cumberland Street
Barrie, ON L4N 2P6
www.JDEngineering.ca

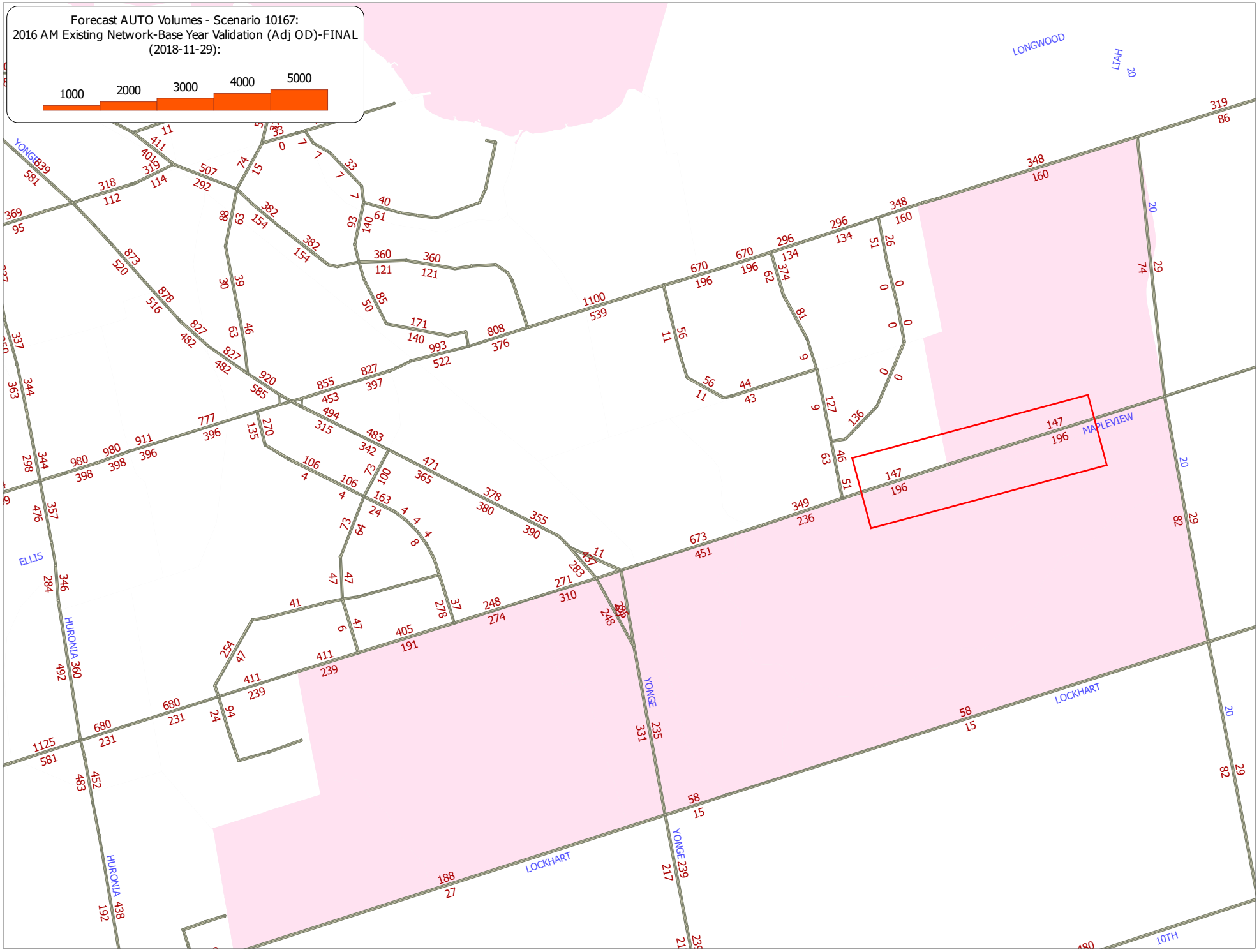
AREA MUNICIPALITY
CITY OF BARRIE

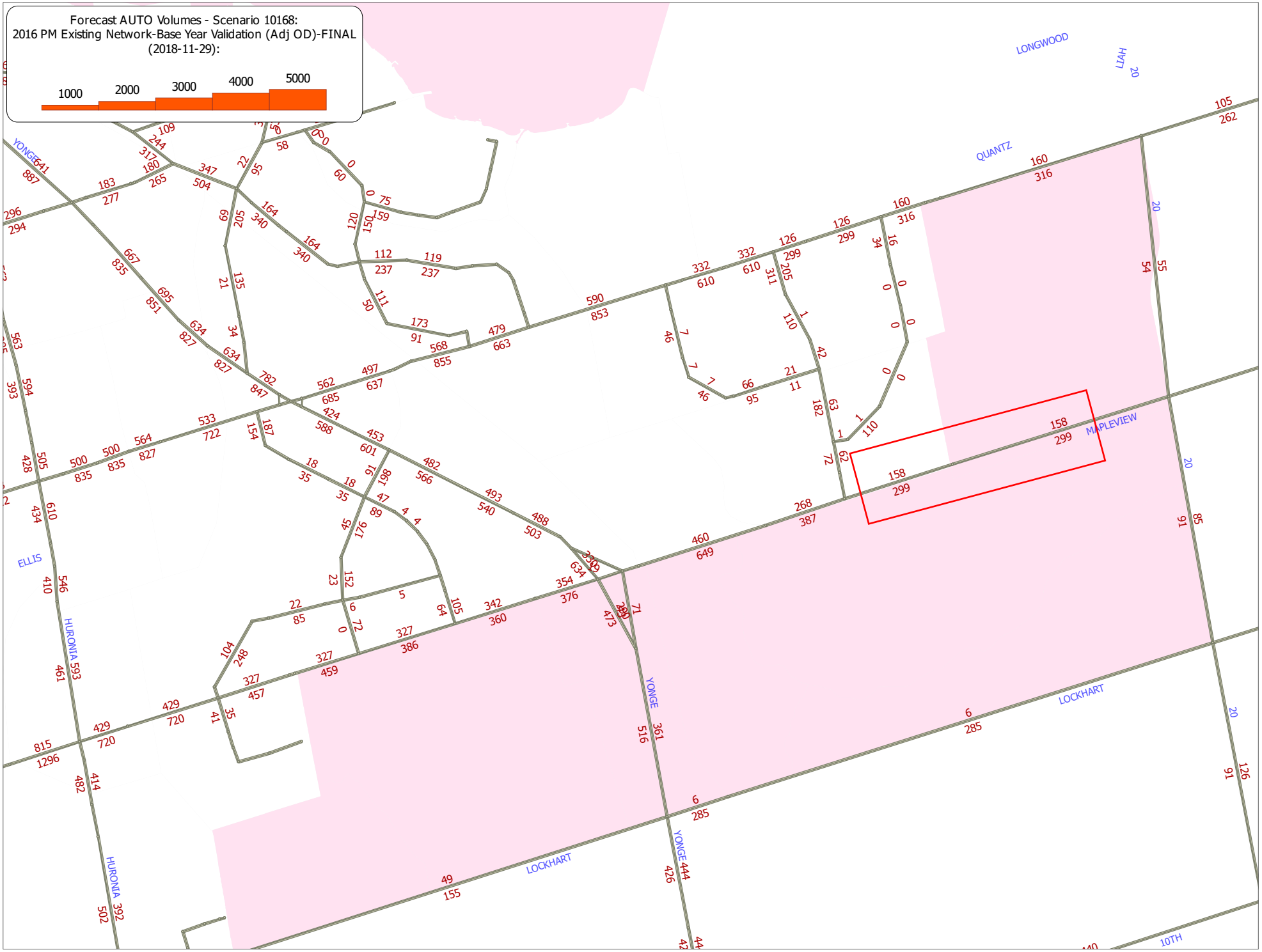
953 MAPLEVIEW DRIVE EAST
BLOCK 192

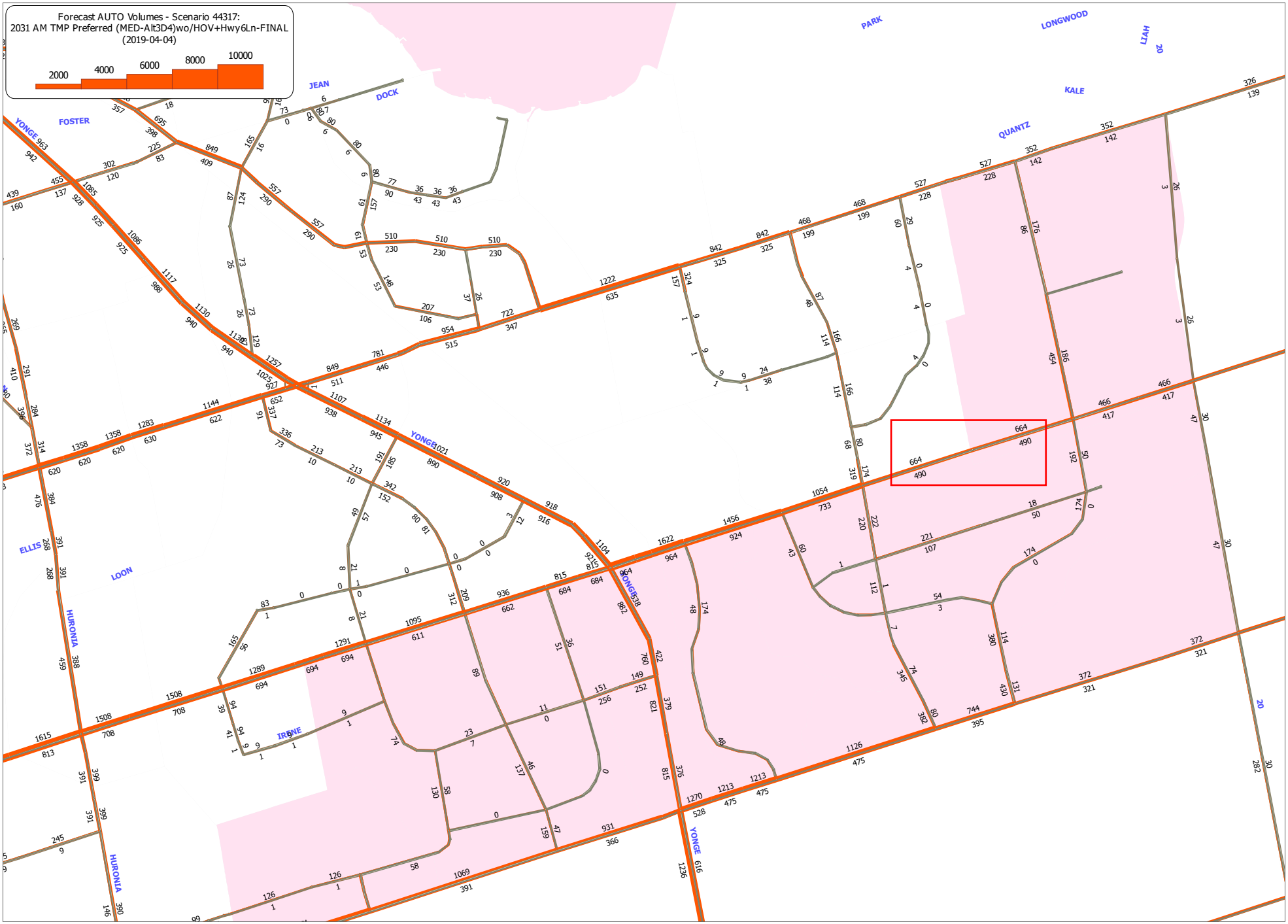
SIGHT DISTANCE REVIEW

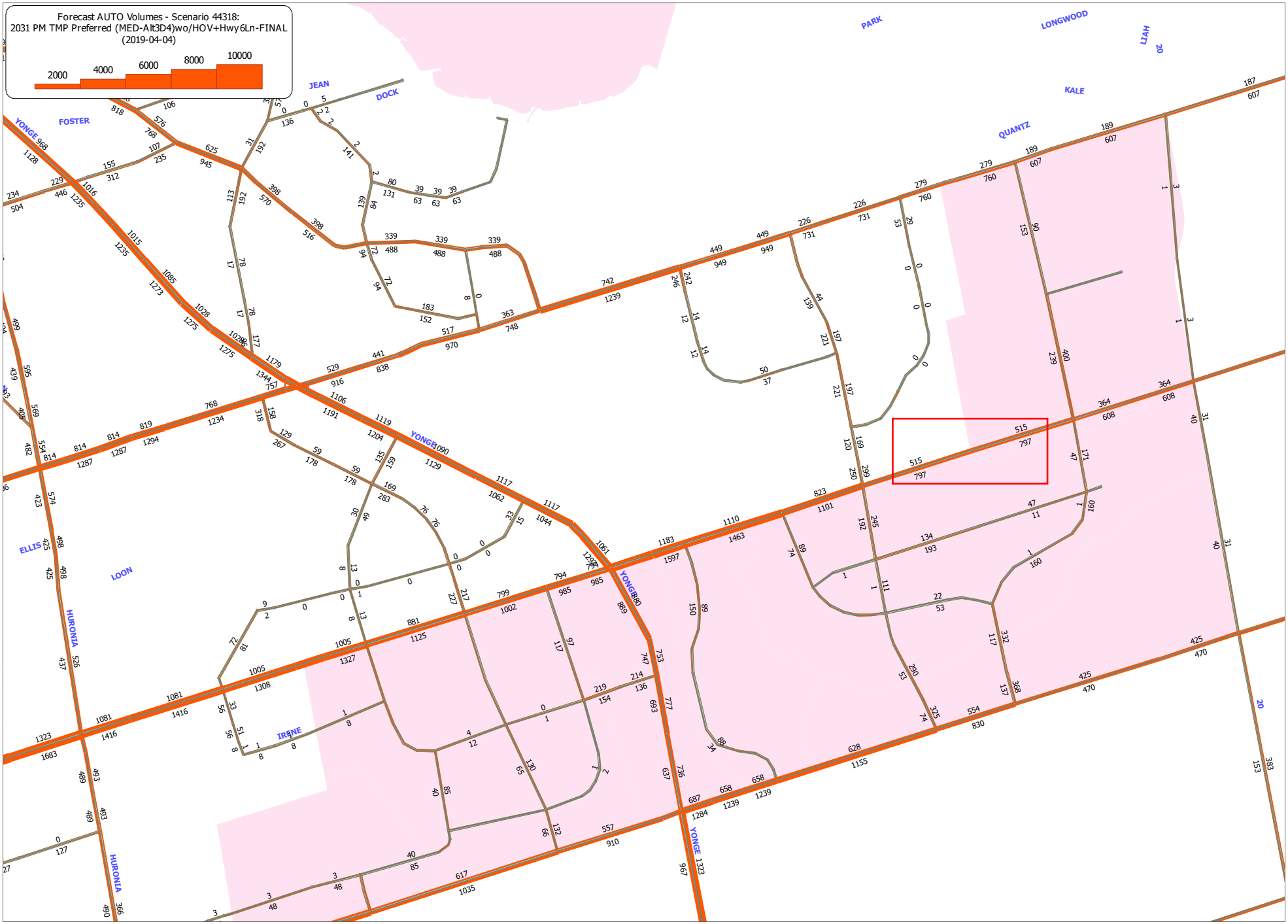
DESIGN: RH	DATE: 06/24
DRAWN: RH	DATE: 06/24
REVIEWED: JN	DATE: 06/24
SCALE HOR. 1:400	SCALE VERT. N/A
SHEET NO. 1302 - BLOCK 192	

Appendix C – Traffic Data


Forecast AUTO Volumes - Scenario 10167:
2016 AM Existing Network-Base Year Validation (Adj OD)-FINAL
(2018-11-29):
1000
2000
3000
4000
5000
LONGWOOD
MAPLEVIEW
LOCKHART
YONGE
ELLIS
HURONIA 360
HURONIA 438
10TH


Forecast AUTO Volumes - Scenario 10168:
2016 PM Existing Network-Base Year Validation (Adj OD)-FINAL
(2018-11-29):
1000
2000
3000
4000
5000
LONGWOOD
LIAH
QUANTZ
MAPLEVIEW
YONGE
ELLIS
HURONIA
LOCKHART
10TH


Forecast AUTO Volumes - Scenario 44317:
2031 AM TMP Preferred (MED-Alt3D4)wo/HOV+Hwy6Ln-FINAL
(2019-04-04)
2000
4000
6000
8000
10000
JEAN
DOCK
FOSTER
YONGE
PARK
LONGWOOD
LIAH
KALE
QUANTZ
ELLIS
LOON
HURONIA
IRENE
20


Forecast AUTO Volumes - Scenario 44318:
2031 PM TMP Preferred (MED-Alt3D4)wo/HOV+Hwy6Ln-FINAL
(2019-04-04)
2000
4000
6000
8000
10000
PARK
LONGWOOD
LIAH
KALE
QUANTZ
JEAN
DOCK
FOSTER
YONGE
ELLIS
LOON
HURONIA
IRENE
20

Appendix D –
Synchro Analysis Output

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	367	25	0	492	0	5
Future Volume (Veh/h)	367	25	0	492	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	399	27	0	535	0	5
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			426		948	412
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			426		948	412
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1133		290	640

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	426	535	5
Volume Left	0	0	0
Volume Right	27	0	5
cSH	1700	1700	640
Volume to Capacity	0.25	0.31	0.01
Queue Length 95th (m)	0.0	0.0	0.2
Control Delay (s)	0.0	0.0	10.7
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.7
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	559	72	0	396	0	3
Future Volume (Veh/h)	559	72	0	396	0	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	608	78	0	430	0	3
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			686		1077	647
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			686		1077	647
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			908		242	471

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	686	430	3
Volume Left	0	0	0
Volume Right	78	0	3
cSH	1700	1700	471
Volume to Capacity	0.40	0.25	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s)	0.0	0.0	12.7
Lane LOS			B
Approach Delay (s)	0.0	0.0	12.7
Approach LOS			B

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		43.8%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	559	72	0	396	0	3
Future Volume (Veh/h)	559	72	0	396	0	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	608	78	0	430	0	3
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			686		1077	647
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			686		1077	647
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			908		242	471

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	686	430	3
Volume Left	0	0	0
Volume Right	78	0	3
cSH	1700	1700	471
Volume to Capacity	0.40	0.25	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s)	0.0	0.0	12.7
Lane LOS			B
Approach Delay (s)	0.0	0.0	12.7
Approach LOS			B

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		43.8%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	559	72	0	396	0	3
Future Volume (Veh/h)	559	72	0	396	0	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	608	78	0	430	0	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (m)	252					
pX, platoon unblocked						
vC, conflicting volume			686		1077	647
vC1, stage 1 conf vol					647	
vC2, stage 2 conf vol					430	
vCu, unblocked vol			686		1077	647
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			908		451	471

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	686	430	3
Volume Left	0	0	0
Volume Right	78	0	3
cSH	1700	1700	471
Volume to Capacity	0.40	0.25	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s)	0.0	0.0	12.7
Lane LOS			B
Approach Delay (s)	0.0	0.0	12.7
Approach LOS			B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	403	87	0	664	0	16
Future Volume (Veh/h)	403	87	0	664	0	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	438	95	0	722	0	17
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (m)	252					
pX, platoon unblocked						
vC, conflicting volume			533		1208	486
vC1, stage 1 conf vol					486	
vC2, stage 2 conf vol					722	
vCu, unblocked vol			533		1208	486
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			1035		412	582

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	533	722	17
Volume Left	0	0	0
Volume Right	95	0	17
cSH	1700	1700	582
Volume to Capacity	0.31	0.42	0.03
Queue Length 95th (m)	0.0	0.0	0.7
Control Delay (s)	0.0	0.0	11.4
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.4
Approach LOS			B

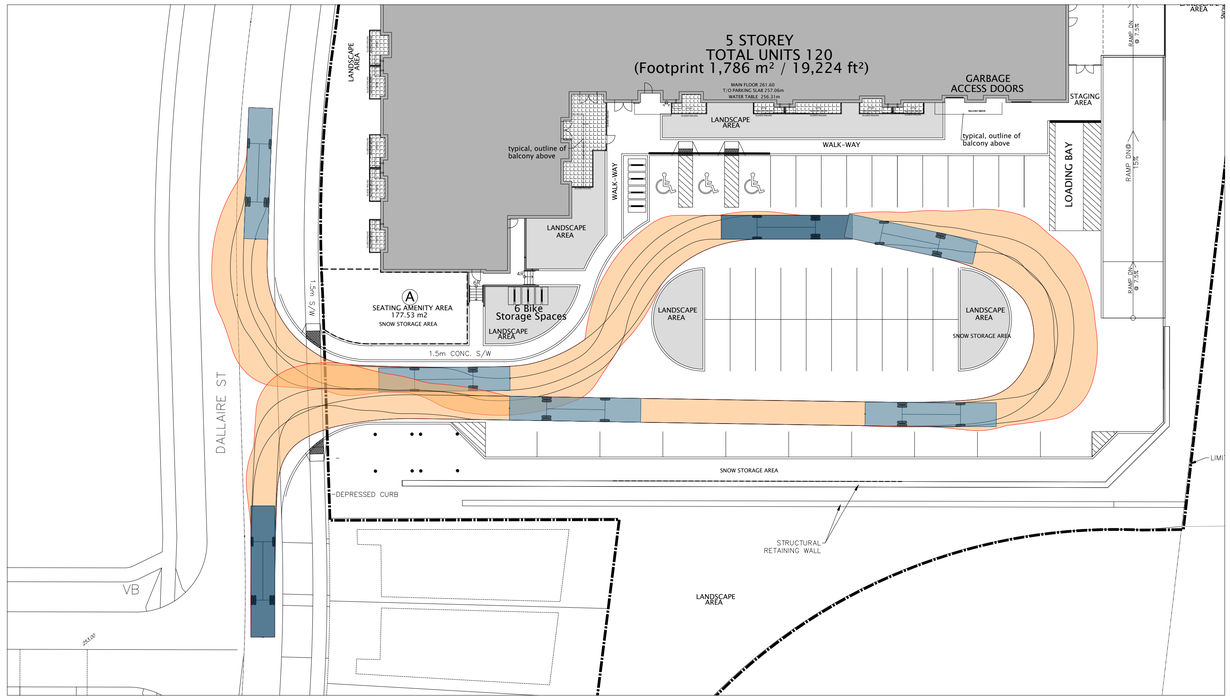
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

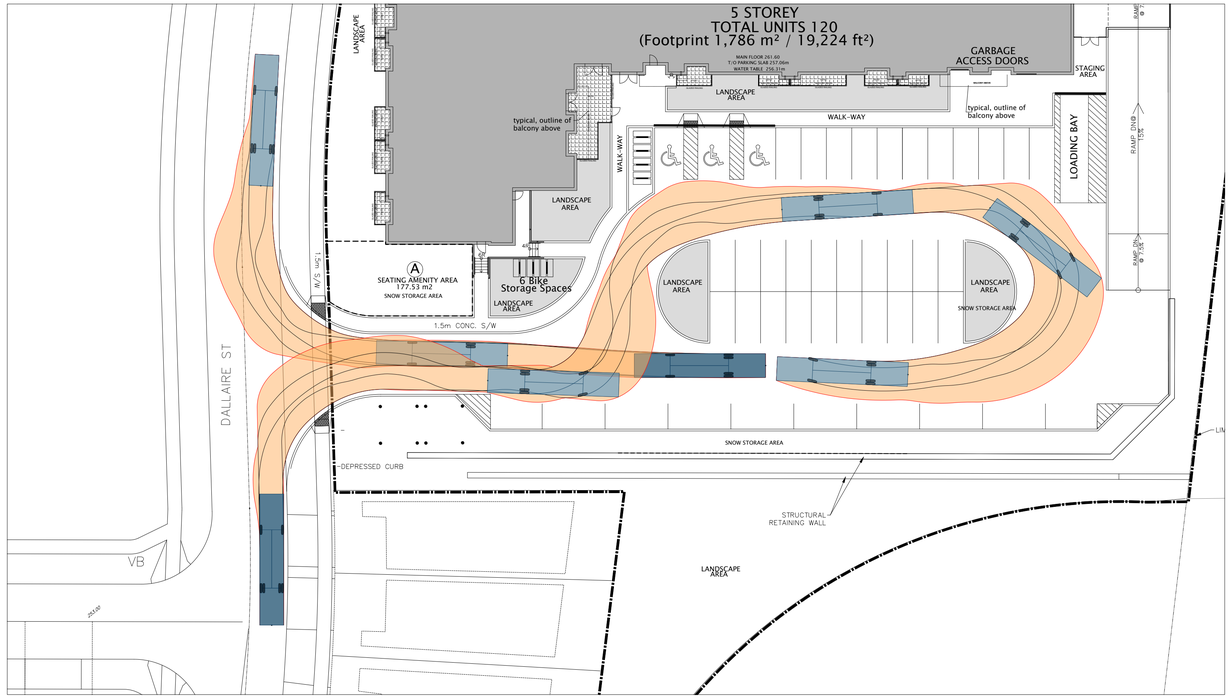
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	542	255	0	515	0	12
Future Volume (Veh/h)	542	255	0	515	0	12
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	589	277	0	560	0	13
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (m)	252					
pX, platoon unblocked						
vC, conflicting volume			866		1288	728
vC1, stage 1 conf vol					728	
vC2, stage 2 conf vol					560	
vCu, unblocked vol			866		1288	728
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			777		395	424

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	866	560	13
Volume Left	0	0	0
Volume Right	277	0	13
cSH	1700	1700	424
Volume to Capacity	0.51	0.33	0.03
Queue Length 95th (m)	0.0	0.0	0.7
Control Delay (s)	0.0	0.0	13.8
Lane LOS			B
Approach Delay (s)	0.0	0.0	13.8
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix E –
Swept Path Analysis

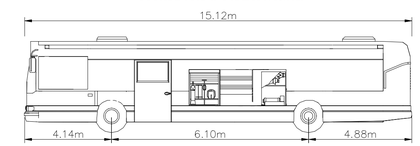




DESIGN VEHICLE

FIRE TRUCK (SMEAL)

VEHICLE WIDTH: 2.50m
OUTSIDE TURNING RADIUS: 16.00m



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4. BASE DRAWING PROVIDED BY S&C ARCHITECTS INC. ON JUNE 6, 2024.

NO.	DATE	APPROVED	REVISIONS
1.	JUNE 2024	JN	FIRST SUBMISSION

JD Northcote Engineering Inc.
Phone: 705.725.4035
86 Cumberland Street
Barrie, ON L4N 2P6
www.JDEngineering.ca

AREA MUNICIPALITY

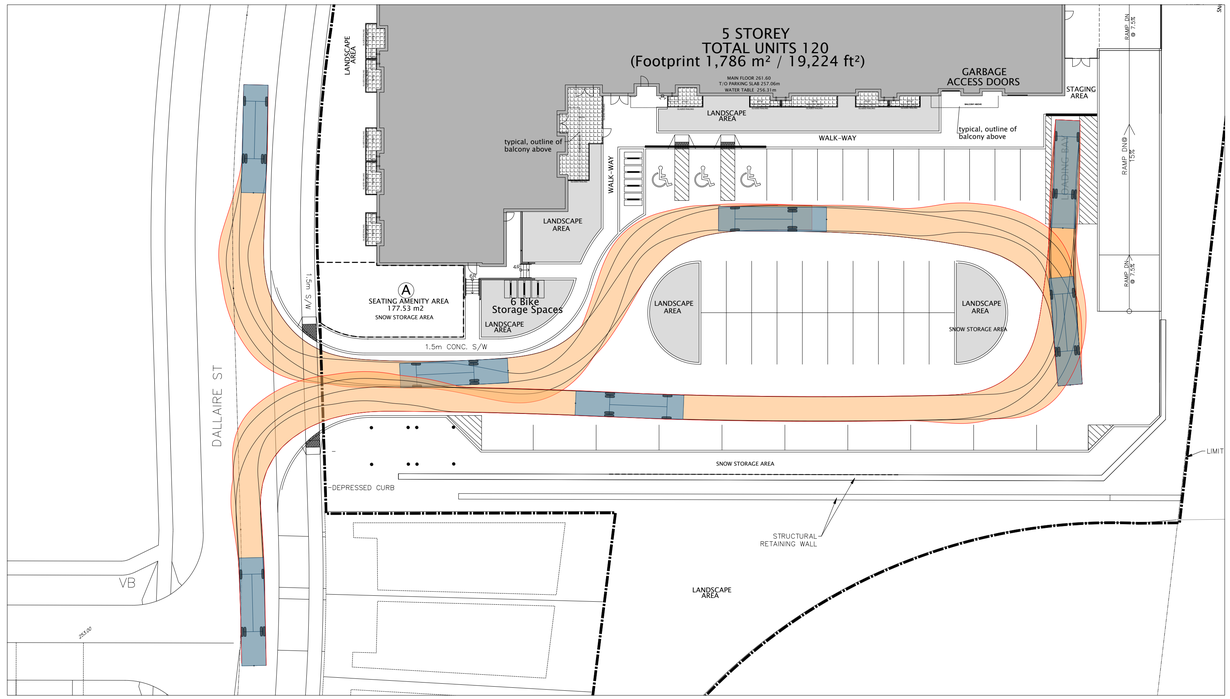
CITY OF BARRIE

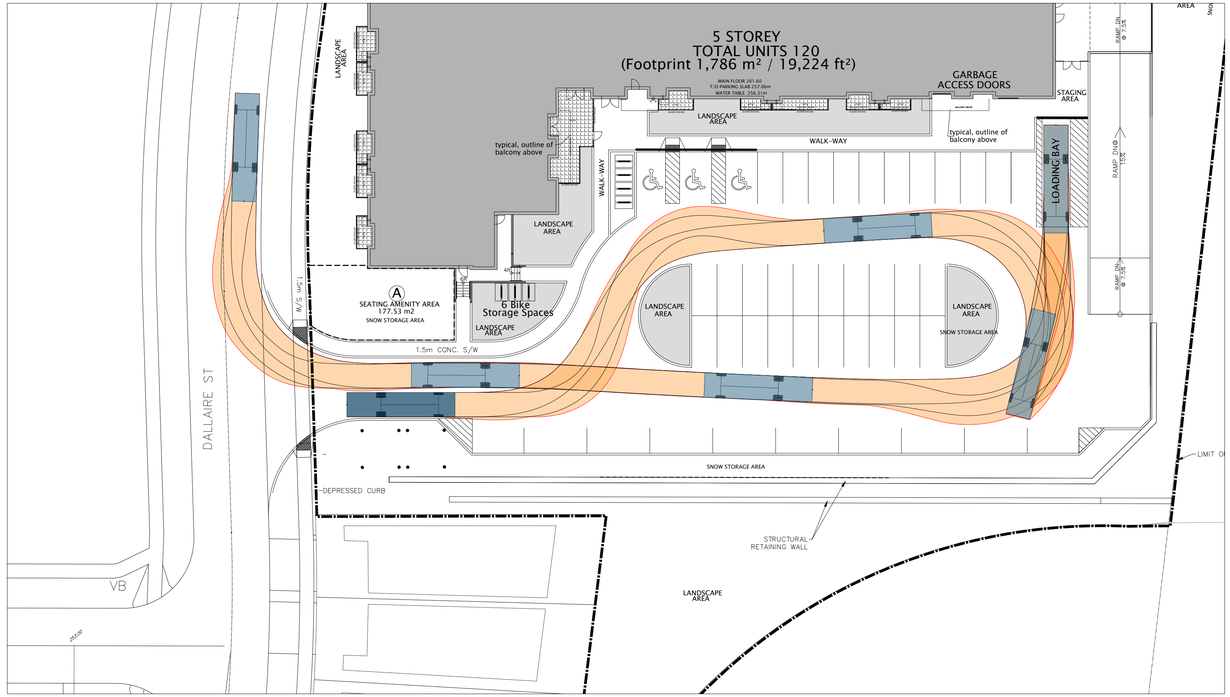
953 MAPLEVIEW DRIVE EAST
BLOCK 192

EMERGENCY VEHICLE
TURNING MOVEMENTS

DESIGN:	JN	DATE:	06/24
DRAWN:	JN	DATE:	06/24
REVIEWED:	JN	DATE:	06/24
SCALE HOR.	1:300	SCALE VERT.	N/A

SHEET NO.
1302 - TURN 1

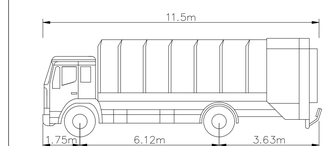




DESIGN VEHICLE

BARRIE RECYCLING TRUCK

VEHICLE WIDTH: 2.60m
OUTSIDE TURNING RADIUS: 12.35m



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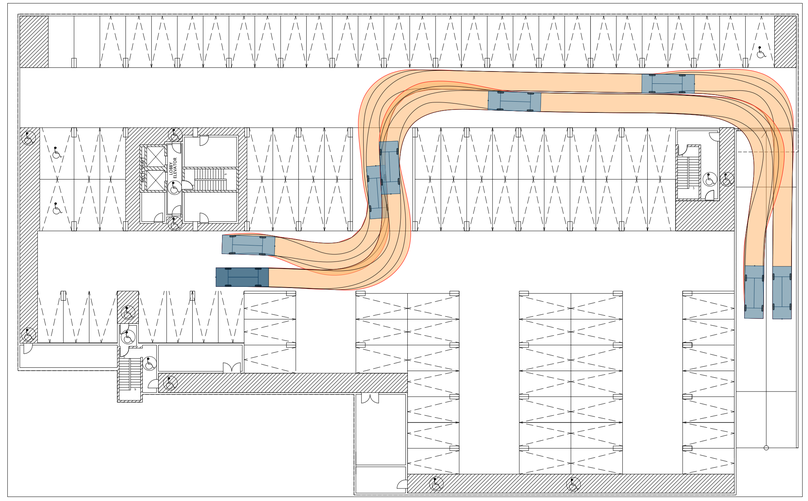
AREA MUNICIPALITY
CITY OF BARRIE

953 MAPLEVIEW DRIVE EAST
BLOCK 192

WASTE VEHICLE
TURNING MOVEMENTS

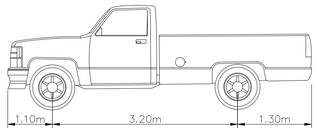
DESIGN:	JN	DATE:	06/24
DRAWN:	JN	DATE:	06/24
REVIEWED:	JN	DATE:	06/24
SCALE HOR.	1:300	SCALE VERT.	N/A
SHEET NO.	1302 - TURN 2		



DESIGN VEHICLE

PASSENGER VEHICLE (TAC P)

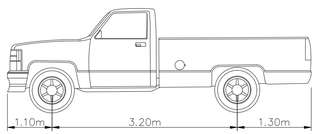
VEHICLE WIDTH: 2.00m
OUTSIDE TURNING RADIUS: 6.30m

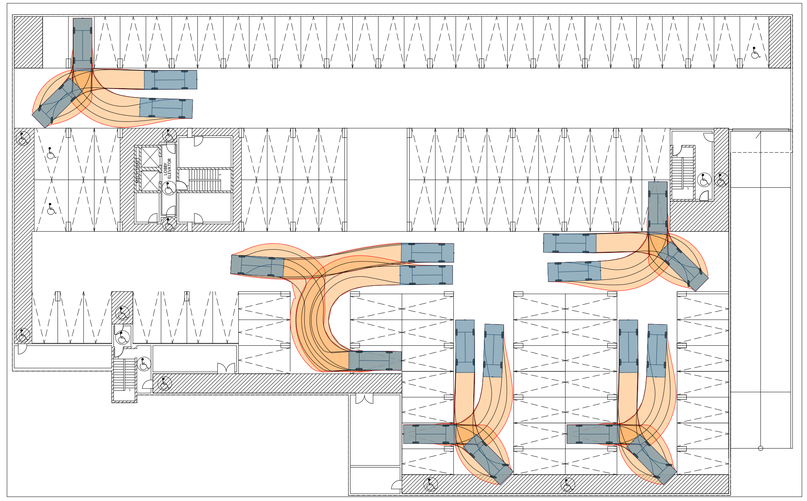


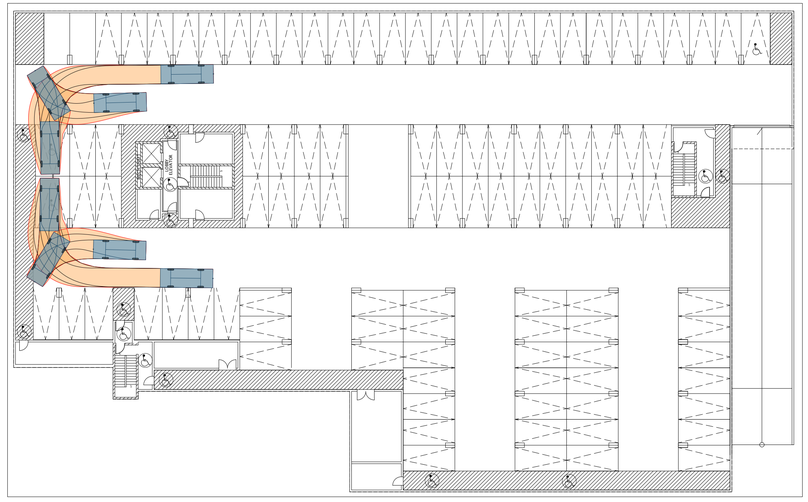
DESIGN VEHICLE

PASSENGER VEHICLE (TAC P)

VEHICLE WIDTH: 2.00m
OUTSIDE TURNING RADIUS: 6.30m



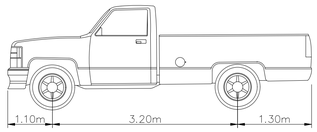




DESIGN VEHICLE

PASSENGER VEHICLE (TAC P)

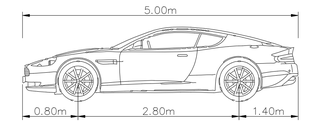
VEHICLE WIDTH: 2.00m
OUTSIDE TURNING RADIUS: 6.30m

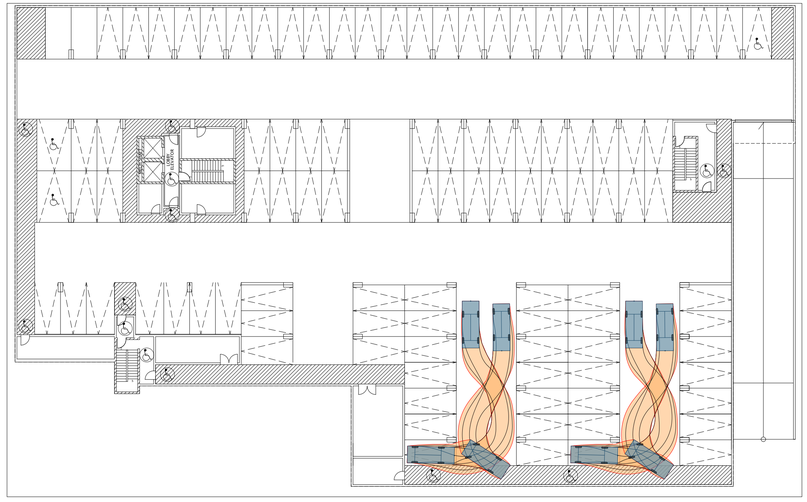


DESIGN VEHICLE

COMPACT VEHICLE

VEHICLE WIDTH: 2.00m
OUTSIDE TURNING RADIUS: 5.50m





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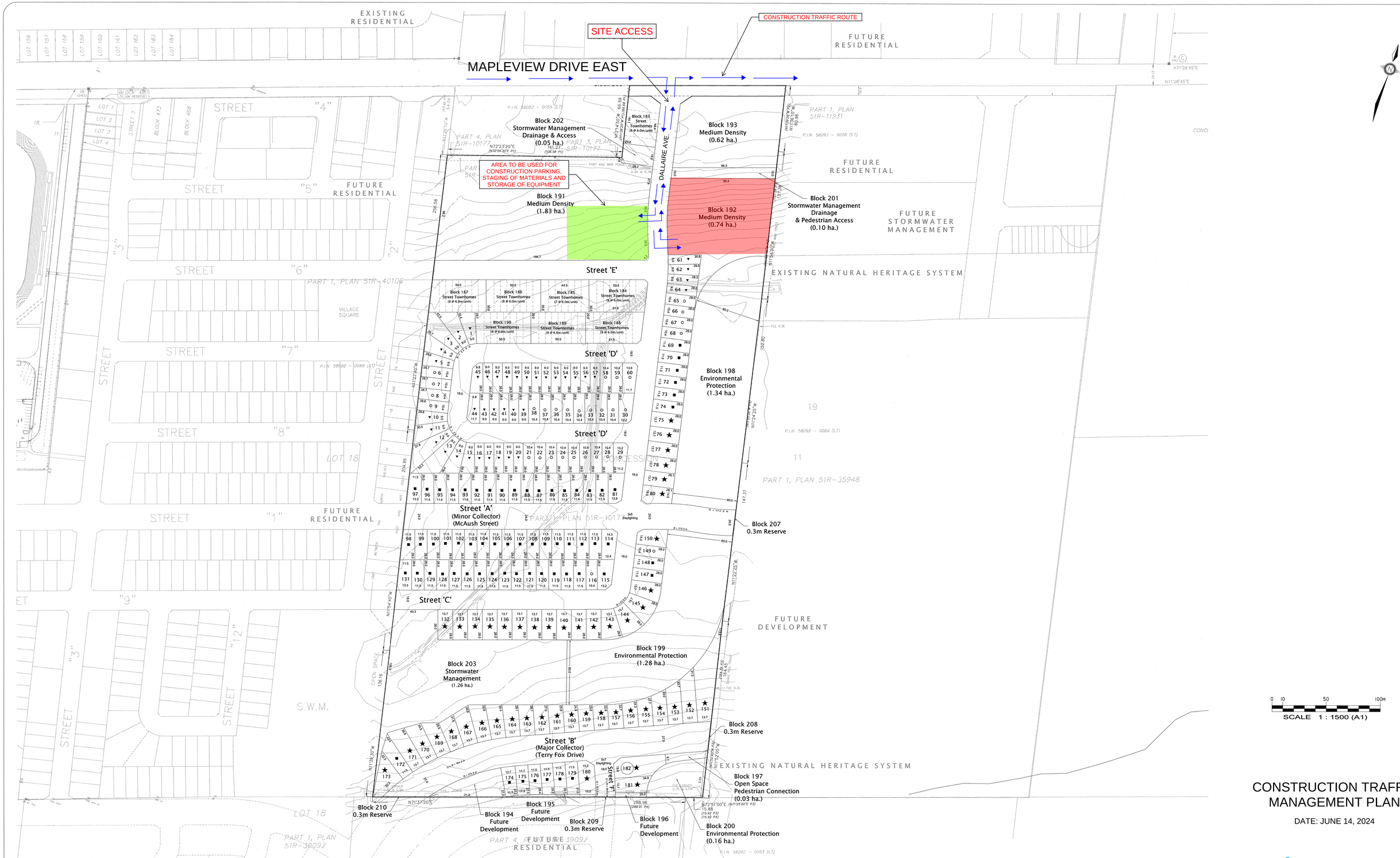
CITY OF BARRIE

953 MAPLEVIEW DRIVE EAST
BLOCK 192

PASSENGER VEHICLE
TURNING MOVEMENTS

DESIGN:	JN	DATE:	06/24
DRAWN:	JN	DATE:	06/24
REVIEWED:	JN	DATE:	06/24
SCALE HOR.	1:300	SCALE VERT.	N/A
SHEET NO.	1302 - TURN 3		

Appendix F –
Construction Traffic Management Plan



CONSTRUCTION TRAFFIC MANAGEMENT PLAN

DATE: JUNE 14, 2024

MAPLEVIEW SOUTH (INNISFIL) LTD.
953 MAPLEVIEW DRIVE BARRIE, ONTARIO

ENGINEERING