130 Mountainview Road

Traffic Impact and Parking Study

9431870 Canada Corp

10 December 2024

The Power of Commitment

Executive Summary

GHD Limited is pleased to provide the following Traffic Impact Study for the proposed mixed-use development at 130 Mountainview Road North in the Town of Halton Hills.

This report determines the site related traffic and subsequent traffic related impacts on the adjacent road network and site driveways during the weekday a.m. and p.m. peak hours. These impacts are based on the projected future background traffic and road network conditions derived for 2042 future planning horizon year.

Based on the approved Terms of Reference for the study, the following intersections were included in the study area:

- Mountainview Road North and River Drive
- Mountainview Road North and John Street
- River Drive and Daniela Court
- River Drive and Proposed Site Access
- Mountainview Road North and Proposed Site Access

The proposed site plan and consists of multiple towers at different storey level with a total of 1,481 residential units and 525 m^2 of ground floor commercial.

Access to the subject site is proposed via a right-in-right-out access along Mountainview Road North and a full-moves access along River Drive.

Based on ITE Trip Generation rates, the subject site is expected to generate a total of 364 two-way trips during the a.m. peak hour consisting of 88 inbound and 276 outbound trips. During the p.m. peak hour, it is expected to generate 444 new two-way vehicles trips consisting of 268 inbound and 176 outbound trips.

Improvements to the intersection of River Drive and Mountainview Road North were recommended to accommodate the background developments. Changes include reducing the southbound approach to one shared through/right lane and one left-turn lane with 50 metres of storage and the northbound approach to a separate left-turn lane with 50 metres of storage.

Under existing traffic conditions, all intersections are operating at acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours.

Under the 2042 future background traffic conditions, following the lane arrangement changes on Mountainview Road North and River Drive, the intersection continues to operate with acceptable v/c ratios, delays, and queuing. As a result, no improvements are recommended for the intersection during both peak hours.

The intersection of John Street and Mountainview Road North contains a critical movement for the southbound through-right (SBTR) movement during both peak hours. During the a.m. peak hour, the SBTR movement has a v/c ratio of 1.00 and a LOS of F and during the p.m. peak hour the SBTR movement has a v/c ratio of 0.68 and a LOS of C.

All other movements continue to operate with acceptable v/c ratios, delays, and queuing.

With the addition of site traffic, Mountainview Road North and Rive Drive continues to operate with acceptable v/c ratios, delays and queuing during both peak hours. The intersection of John Street and Mountainview Road north still contains the critical movement at SBTR during both peak hours. Traffic signal warrant was completed for this intersection which showed that the signalized light is unnecessary, and it should continue to operate as an all-way stop sign.

A reduction in the parking supply is proposed and is supported through several Provincial, Regional and Town policies including Bill 185, Cutting Red Tape to Build More Homes Act, 2024, which received Royal Assent in June 2024.

Under Bill 185, new subsections 16 (22) to (24) were added to the Planning Act that related to Official Plans and limit the ability of Official Plans to contain policies requiring an owner to provide or maintain parking facilities within

PMTSA's, certain other areas surrounding and including an existing or planned higher order station or stop and other prescribed areas. The Town has confirmed that the subject lands, within the Georgetown GO MTSA, are defined as such an area and therefore no parking minimums shall apply.

Additionally, the Georgetown GO Station Area/Mill Street Corridor Secondary Plan Review Background and Policy Options Report prepared for the Town, identified that the Georgetown GO MTSA is anticipated to be assigned density targets through the Municipal Comprehensive Review and is therefore expected to become a PMTSA in the future.

The subject site proposes resident parking at a rate of 0.90 spaces per unit and visitor parking at a rate of 0.10 spaces per unit. It is also proposed that the commercial parking will be shared with the resident visitor parking supply. The proposed parking supply is expected to meet the demands of the subject site.

Additionally, TDM measures are proposed for the subject site to encourage residents to explore various modes of transportation in order to reduce their dependency on single occupancy vehicle trips. These measures include a reduction in the parking supply, pedestrian connections to the municipal rights-of-way and transit information packages.

The Town's Zoning By-law only requires bicycle parking be provided for the commercial GFA with a minimum of 3 spaces required. The proposed bicycle parking supply is proposed to be provided at a rate of 0.70 spaces per unit for long-term resident bicycle parking (1,037 spaces) and 0.02 spaces per unit for short-term visitor parking (total of 34 spaces) which exceeds the Zoning By-law requirements and supports the reduced resident parking supply.

The Town's Zoning By-law only requires one loading space for the commercial component. The proposed Site Plan provides a total of 6 loading spaces exceeding the Zoning By-law requirements.

The proposed development's parking provision of 0.90 spaces per unit for residents is supported by Transportation Tomorrow Survey (TTS) data, which shows that approximately 18 percent of apartment households in Georgetown do not own a vehicle. This trend reflects a growing shift towards reduced vehicle ownership, particularly in areas like Georgetown where convenient transit options, such as the nearby Georgetown GO Station, offer alternatives to driving.

The proposed visitor parking rate of 0.10 spaces per unit is appropriate for this development given the total number of residential units. With a large number of units, the total visitor parking supply scales to a sufficient amount to accommodate expected demand while preventing an oversupply of spaces that would consume valuable land.

The proposed sharing of the commercial visitor and residential visitor spaces is consistent with the idea that the ground floor commercial uses proposed as part of a mixed-use sites in dense urban environments will in time be primarily considered ancillary to the local areas as population increases.

The proposed location of Street A's intersections with River Drive and Mountainview Road North satisfy the TAC intersection spacing recommendations.

The proposed site accesses located along Street A have been designed to meet OPSD 350 standards with a minimum of 7.2 metre pavement width and a curb radii of at least 4.5 metres.

A Vehicle Swept Path Analysis was undertaken to assess the site's ability to accommodate the required turning movements of a waste collection truck, MSU truck, emergency vehicle and passenger vehicles as per TAC design guidelines and confirmed that the site loading areas and underground parking garage can sufficiently accommodate the aforementioned design vehicles.

The traffic study demonstrates that the proposed mixed-use development can be effectively supported by the current and planned road network, with no significant impact on traffic flow or road capacity.

We trust that this satisfies your requirements, but do not hesitate to contact the undersigned if you have any questions.

Sincerely,

GHD

December 10, 2024

Subhesh Baral,

Transportation Planner

William Maria, P. Eng.

Transportation Planning Lead

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1. Introduction

1.1 Retainer and Objective

GHD Limited was retained to prepare a Traffic Impact Study for a proposed mixed-use development located at 130 Mountainview Road North in Town of Halton Hills. This site location is illustrated in **Figure 1**.

The purpose of this study is to:

- Establish baseline traffic conditions for the study area in 2024 and determine future background operating conditions for a future planning horizon in 2042 (five years from the assumed build-out of the development).
- Estimate the site trips generated by the proposed development and distribute the traffic to the adjacent road network.
- Determine future operating traffic conditions during the weekday peak periods through intersection capacity analysis.
- Complete a review of the site accesses and internal site circulation.
- Recommend Transportation Demand Management measures to reduce single occupancy vehicle trips to the site.

1.2 Study Team

The GHD team involved in the preparation of the study are:

- William Maria, P. Eng., Transportation Planning Lead
- Subhesh Baral, Transportation Planner

Figure 1 Site Location

2. Site Characteristics

2.1 Study Area

As per the agreed Terms of Reference for the study attached in **Appendix A**, the following intersections were included in the study area:

- Mountainview Road North and River Drive
- Mountainview Road North and John Street
- River Drive and Daniela Court
- River Drive and the proposed Street A
- Mountainview Road North and the proposed Street A

2.2 Proposed Development Content

A site plan for the proposed development is shown in **Figure 2** and provided in **Appendix B**. It consists of multiple towers with a new public road (Street A) connecting River Drive to Mountainview Road North. There are a proposed 1,481 residential units in total with 525 m^2 (5,651 ft^2) of ground floor commercial.

Access to the subject site is proposed via a right-in-right-out access along Mountainview Road North and a full-moves access along River Drive.

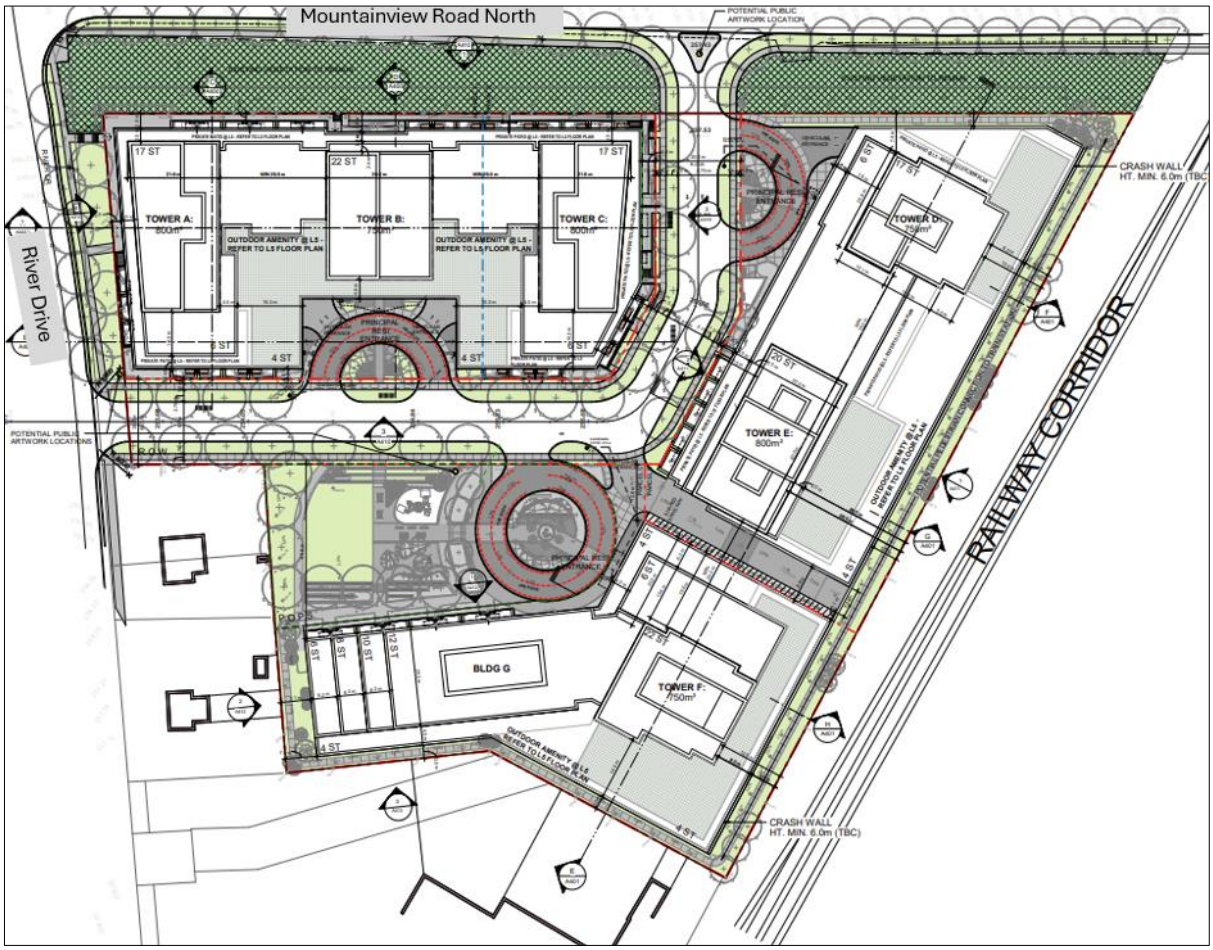

Figure 2 Proposed Site Plan

3. Existing Conditions

3.1 Existing Road Network

Mountainview Road North is a north/south minor arterial road under the jurisdiction of the Town of Halton Hills. Within the study area, it has a four-lane cross-section south of River Drive and is reduced to a two-lane cross-section north of River Drive. The intersection of Mountainview Road North and River Drive is signalized with a shared through/left-turn and shared through/right-turn lane in the southbound direction and a shared through/left-turn and a right-turn lane in the northbound direction. The intersection with John Street is an all-way stop-controlled intersection with an exclusive left-turn lane in the northbound and southbound directions. The posted speed limit along Mountainview Road North is 50 km/h.

River Drive is an east/west minor arterial road under the jurisdiction of the Town of Halton Hills. Within the study area it has a two-lane cross-section. The intersection of Mountainview Road North and River Drive is signalized with no auxiliary turning lanes provided. The posted speed limit along River Drive is 50 km/h.

John Street is a local road under the jurisdiction of the Town of Halton Hills. Within the study area it has on a two-lane cross-section. The intersection of Mountainview Road North and John Street is an all-way stop-controlled intersection with no auxiliary turning lanes provided. The posted speed limit along John Street is 50 km/h.

Daniela Court is a local road under the jurisdiction of the Town of Halton Hills. Within the study area it has a two-lane cross-section. The intersection of River Drive and Daniela Court is unsignalized with the stop-control only provided along Daniela Court. The posted speed limit along Daniel Court is 12 km/h.

Stewart MacLaren Road is a local road under the jurisdiction of the Town of Halton Hills. Within the study area it has a two-lane cross-section. The intersection Mountainview Road North and Stewart MacLaren Road is unsignalized with the stop-control only provided along Stewart MacLaren Road. The intersection is restricted to a right-in and right-out operation with the provision of a porkchop island. The assumed posted speed limit along Stewart MacLaren Road is 50 km/h.

The existing lane configurations and intersection control are illustrated in **Figure 3**.

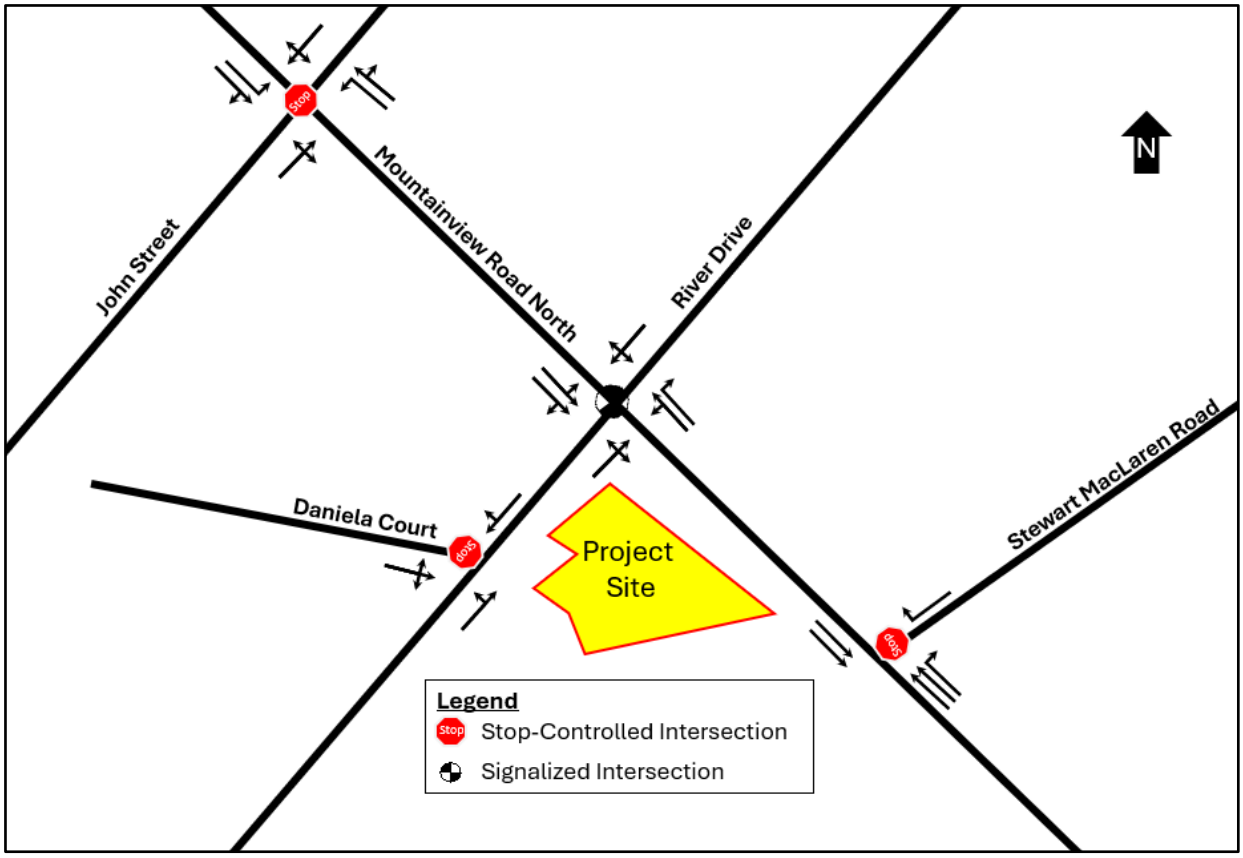

Figure 3 Existing Lane Configuration and Traffic Controls

3.2 Pedestrian and Bicycle Facilities

Within the study area, sidewalks are generally provided along all study area roads with the exception of Daniela Court. The following describes the provision of sidewalks along the study area roadways:

- Sidewalks are provided on both sides of Mountainview Road North, Stewart MacLaren Road, on River Drive only east of Mountainview Road North, and on John Street only east of Mountainview Road North
- A sidewalk is only provided on the north side of River Drive west of Mountainview Road North
- A sidewalk is only provided on the south side of John Street west of Mountainview Road North

Cycling facilities are provided within the study areas through shared roadways and urban shoulders as follows:

- John Street is a signed bike route west of Mountainview Road North
- An urban shoulder is provided along both sides of Mountainview Road North south of River Drive
- An urban shoulder is provided along both sides of River Drive east of Mountainview Road North.

The existing pedestrian sidewalks and cycling facilities are illustrated in **Figure 4**.

Figure 4 Existing Active Transportation Facilities

3.3 Transit Services

The Georgetown GO Station is located approximately 400 metres from the subject site. GO Station services both busses and trains. Georgetown GO has routes to Acton GO, Bramalea GO, Guelph Centra GO, Kitchener GO, Bloor GO and Etobicoke North GO. The train departs from Georgetown GO every 30 minutes during peak hours.

3.4 Existing Traffic Data

GHD contracted Ontario Traffic Inc. to conduct updated turning movement counts at all the study intersections in March 2024. The baseline 2024 traffic volumes for the a.m. and p.m. peak hours are summarized in **Figure 5** below with the full turning movement counts provided in **Appendix C.**

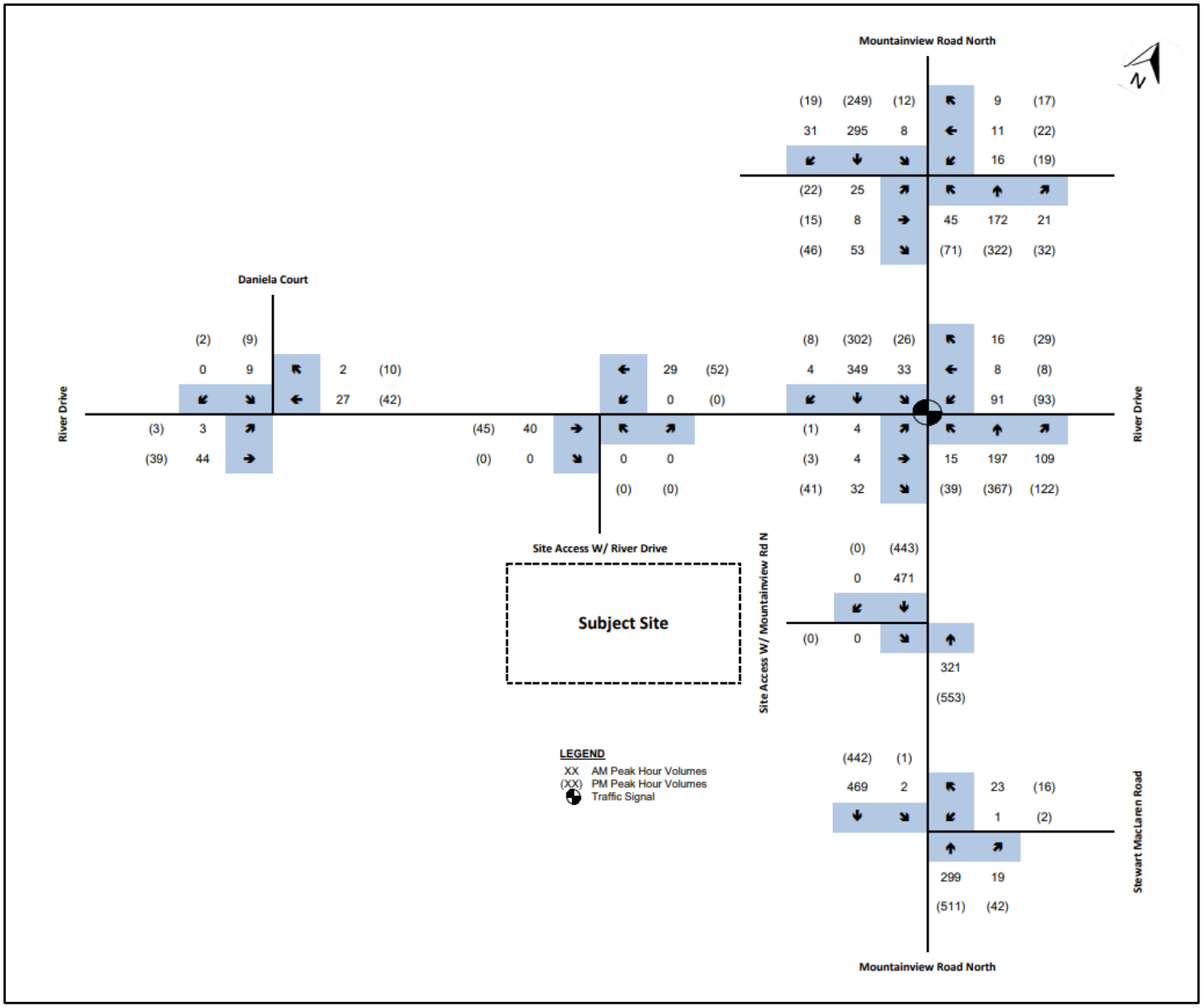

Figure 5 Baseline 2024 Traffic Volumes

4. Future Conditions

4.1 Study Horizon Year

A future horizon year of 2042 was selected for the analysis of future traffic conditions, consisting of the period of five years post build-out which is assumed to be in 2037. The horizon year was generally confirmed with Town staff through the Terms of Reference.

4.2 Corridor Growth

A 2% growth rate was applied to all movements along each road within the study area to estimate corridor growth up to the future horizon years as agreed to in the Terms of Reference with Town staff.

4.3 Background Development Traffic

As identified by Town staff in the Terms of Reference, the following background development were identified as being located near the subject site and would contribute traffic volumes at the study intersections.

- 1 Rosetta Street, completed by Paradigm Transportation Solutions Limited in May 2023.
- 167-171 Mountainview Road North, completed by Paradigm Transportation Solutions Limited in October 2014.
- 9 Caroline Street, completed by Crozier Consulting Engineers in April 2021.

Town staff provided GHD with the Traffic Impact Study for each background development with the relevant excerpts provided in **Appendix D**. GHD assigned the traffic from each background development to the study area roadways as per their respective Traffic Studies. However, given the small number of units located within the background development located at 167-171 Mountainview Road North, the Traffic Study did not complete a trip generation nor assigned traffic to the study area. GHD completed its trip generation and assigned traffic to the study area accordingly.

The locations of the background developments are identified in **Figure 6**. The total background development traffic is summarized in **Figure 7**.

Figure 6 Location of Background Developments

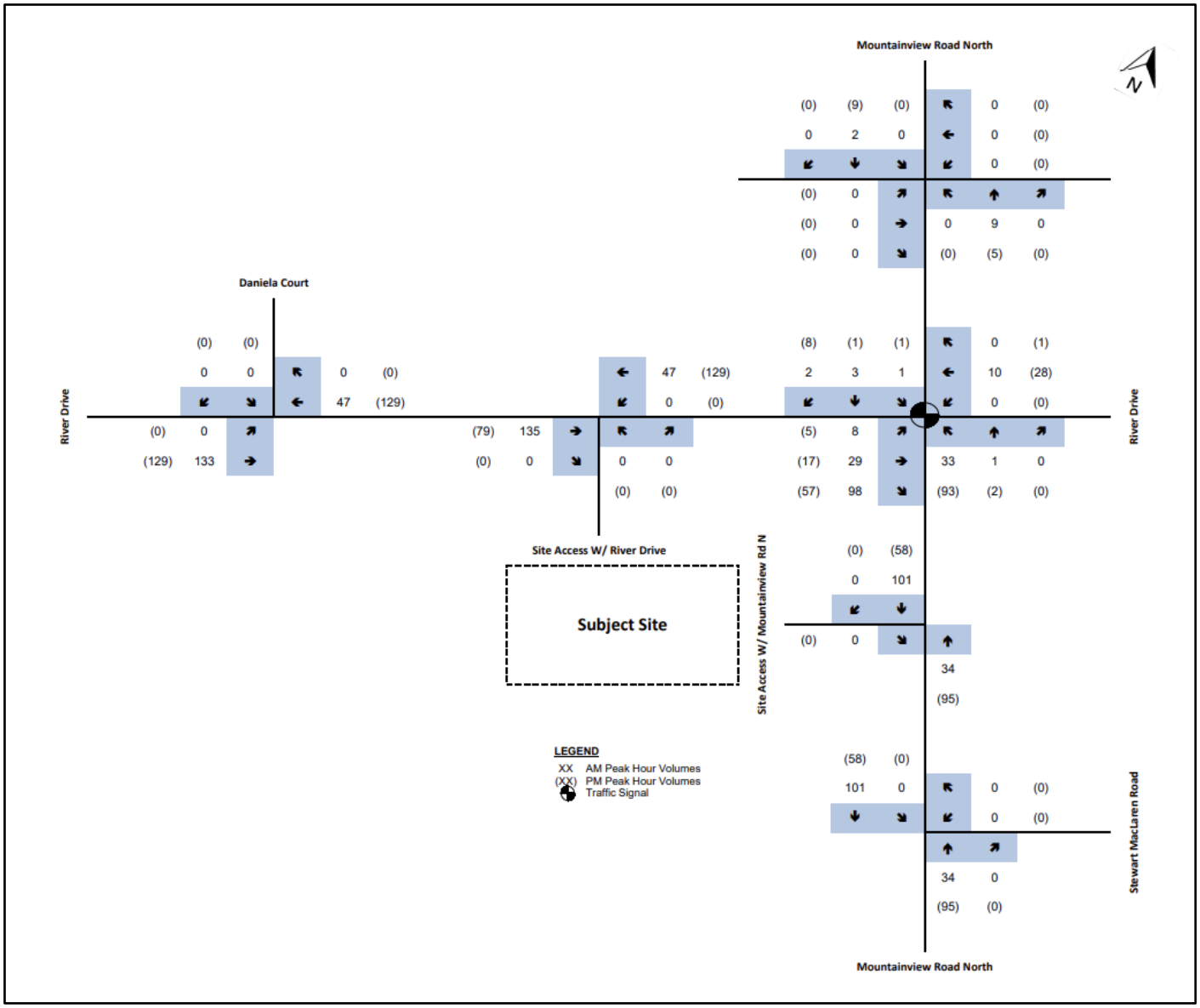

Figure 7 Background Development Traffic

4.4 Future Background Traffic Volumes

The background traffic volumes for the 2042 horizon year were derived by applying the growth rates of 2% to the study area roads. The resulting 2042 future background traffic volumes is summarized in **Figure 8**.

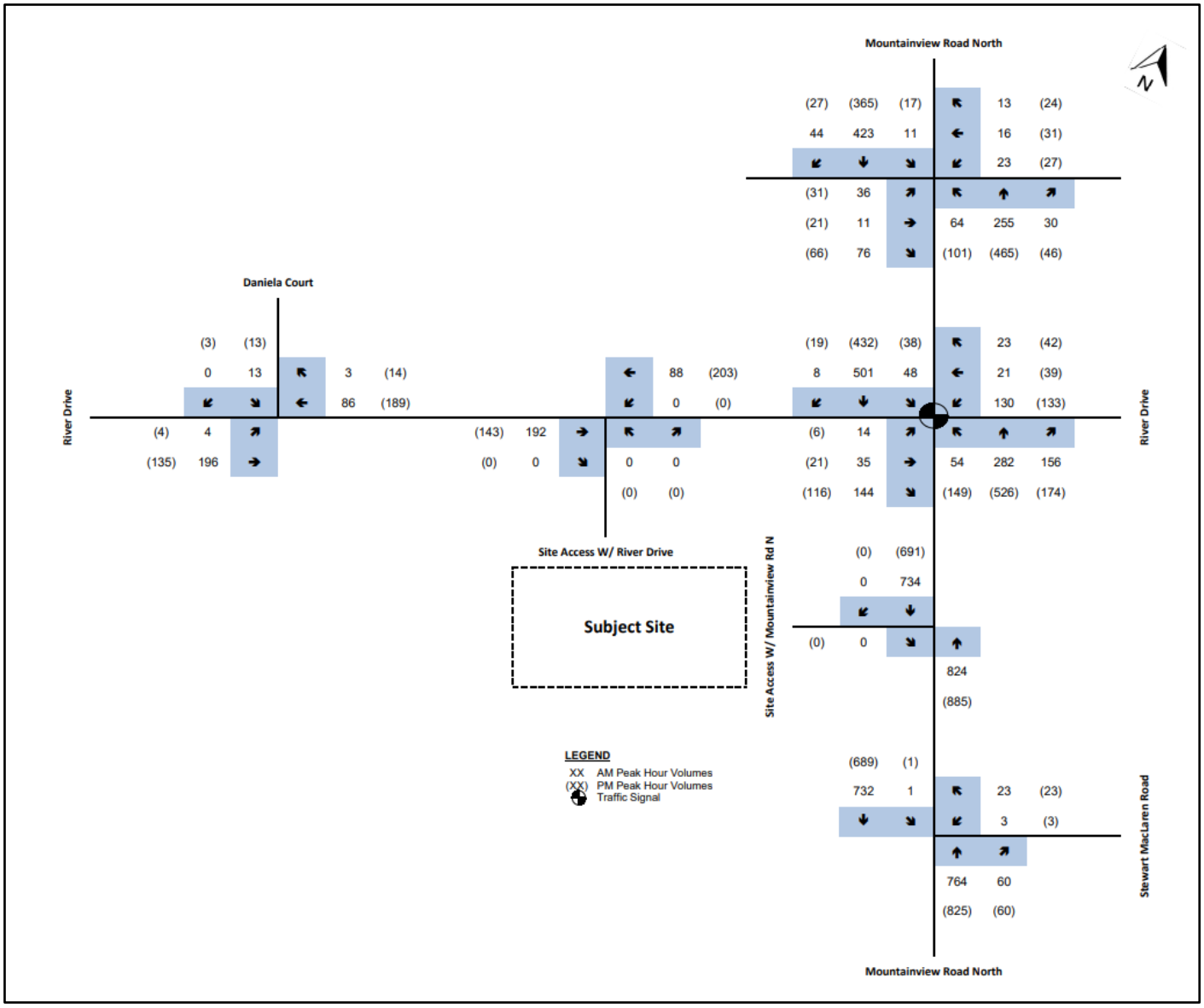

Figure 8 2042 Future Background Traffic Volumes

4.5 Proposed Lane Improvements

The Rosetta Transportation Study recommended changes to the intersection lane configuration at the intersection of River Drive and Mountainview Road North including:

- Reduce the southbound approach to one shared through/right lane and one left-turn lane with 50 metres of storage; and
- Provide a northbound left-turn with 50 metres of storage.

The recommended changes are illustrated in **Figure 9**.

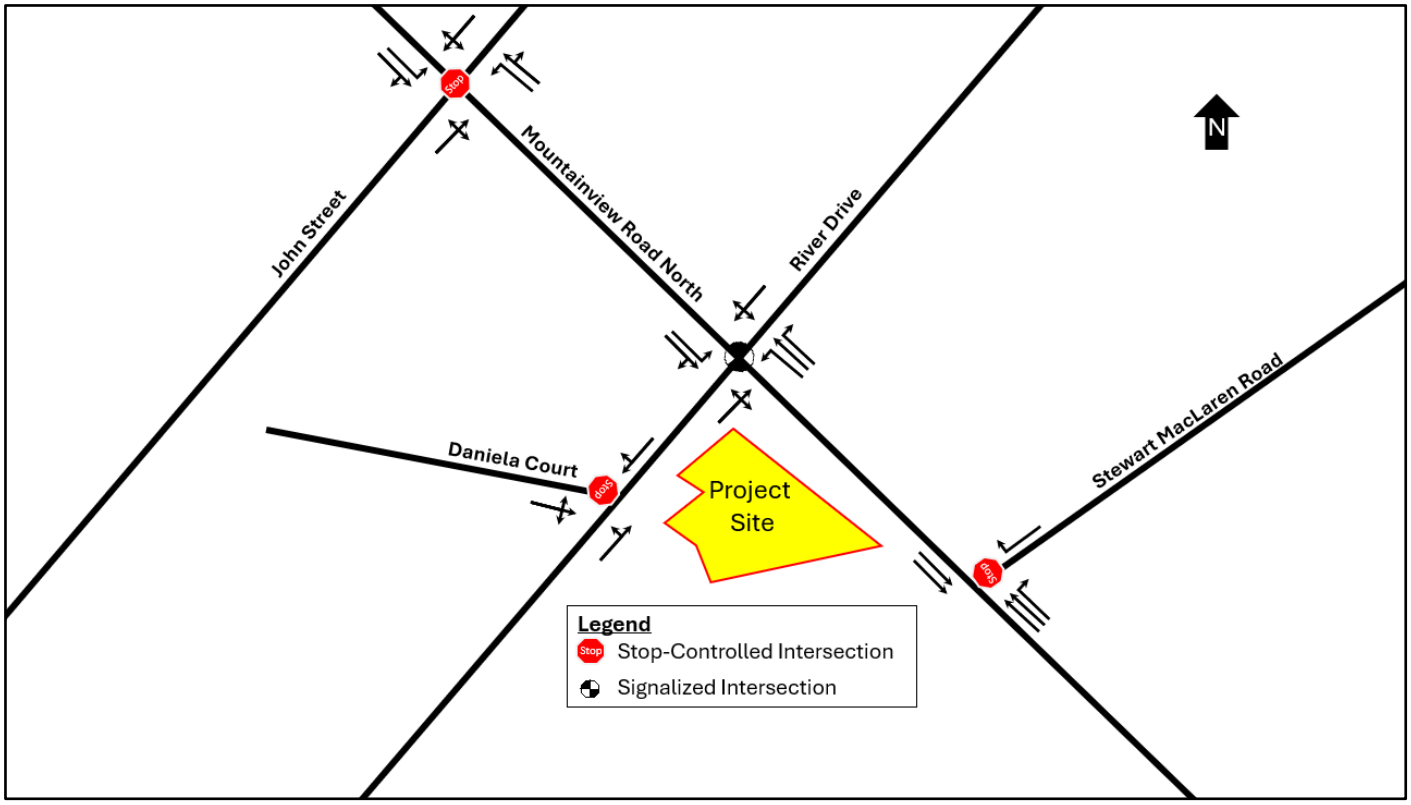

Figure 9 Proposed Lane Improvements

4.6 Future Active Transportation Facilities

As identified on the Town of Halton Hills Active Transportation Master Plan's Proposed On-Road Facility Types, a buffered bike lane is proposed to be provided along Mountainview Road North within the study area.

5. Site Generated Traffic

5.1 Modal Split

Analysis of future traffic conditions did not apply a transit modal split reduction to the estimated site generated trips.

5.2 Site Trip Generation

The proposed development consists of high-rise residential buildings with a total of 1,485 dwelling units and 615 m^2 (6,620 ft^2) of ground floor commercial space.

Site traffic generated by the proposed development for the weekday a.m. and p.m. peak hours was estimated by applying the trip rate for Land Use Code 222 Multifamily Housing (High-Rise) for the residential dwelling units and Land Use Code 822 Strip Retail Plaza (<40, 000 ft^2) for the commercial component in the 11th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE).

Table 1 summarizes the estimated trip generation for the subject site. A comparison of the fitted curve equations and average rates for each individual Land Use Code was completed and whichever calculation resulted in a greater trip

generation was used as a conservative measure.

Table 1 Total Site Trip Generation

Land Use Code	Dwelling Units/GFA	Parameters	Peak Hour Trip Generation					
			Weekday AM			Weekday PM		
			In	Out	Total	In	Out	Total
Multifamily Housing (High-Rise) LUC 222	1,481 dwelling units	Trip Rate	0.051	0.179	0.230	0.161	0.099	0.260
		Trip Ratio	22%	78%	100%	62%	38%	100%
		New Trips	75	267	342	239	147	386
Strip Retail Plaza LUC 822	5,651 ft^2 GFA	Trip Rate	1.964	1.360	3.323	4.381	4.381	8.762
		Trip Ratio	60%	40%	100%	50%	50%	100%
		New Trips	13	9	22	29	29	58
Total			**88**	**276**	**364**	**268**	**176**	**444**

The subject site is expected to generate a total of 364 new two-way trips during the a.m. peak hour consisting of 88 inbound and 276 outbound trips. During the p.m. peak hour, a total of 444 new two-way trips are generated consisting of 268 inbound and 176 outbound trips.

5.3 Site Traffic Distribution and Assignment

The directional distribution for site trips was based on TTS data and a review of the local traffic patterns and is summarized in **Table 2**. The site generated traffic assignment to the study area road network for the weekday a.m. and p.m. peak hours is illustrated in **Figure 10**.

Table 2 Site Traffic Distribution - Residential

Peak Period	Direction	North (Mountain Road North)	South (Mountain Road North))	East (River Drive)
AM	Inbound	0%	89%	11%
	Outbound	0%	76%	24%
PM	Inbound	0%	77%	23%
	Outbound	0%	87%	13%

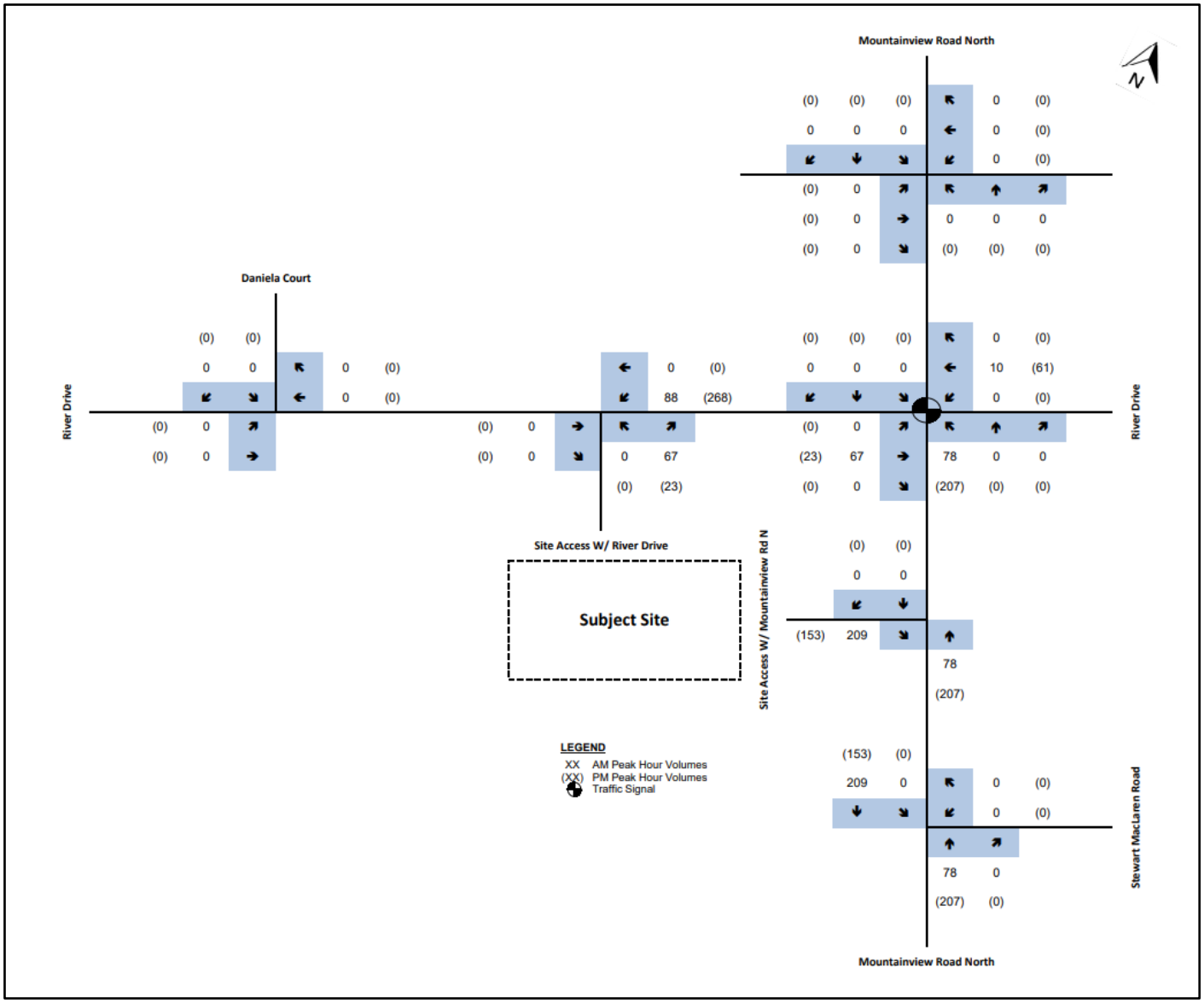

Figure 10 Proposed Site Generated Trips

6. Future Total Traffic

The future total traffic conditions in the weekday a.m. and p.m. peak hours for the 2042 planning horizon year was derived by combining the projected future background traffic with the corresponding estimated site generated traffic. The resulting total traffic volumes are illustrated in **Figure 11**.

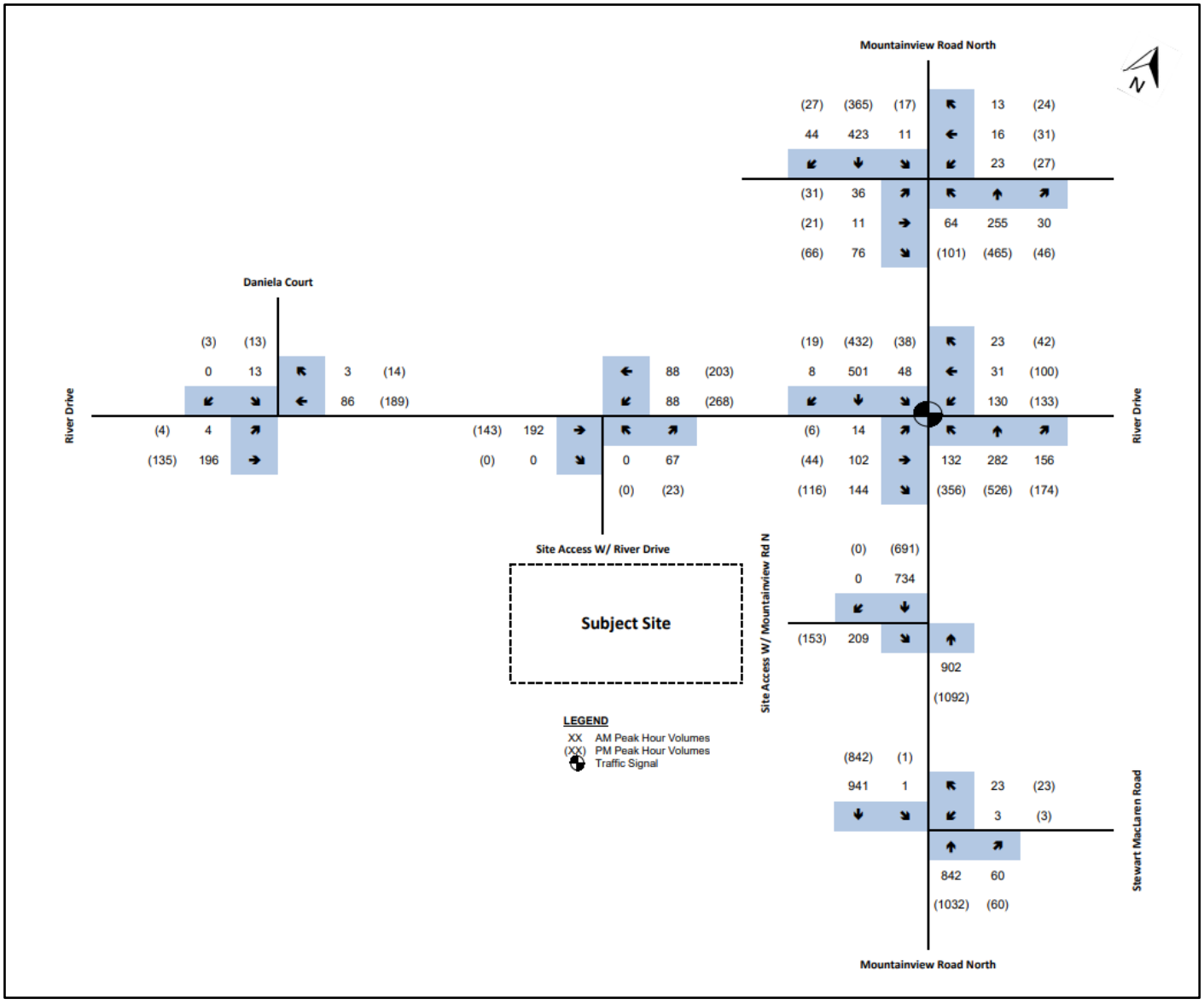

Figure 11 2042 Future Total Traffic Volumes

7. Capacity Analysis

The capacity analysis identifies how well the intersections and driveways are operating. The analysis contained within this report utilized the Highway Capacity Manual (HCM) 2000 procedure within the Synchro Version 11 Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. Queuing characteristics are reported as the predicted 95th percentile queue for each turning movement. Both pedestrian crossing volumes and heavy vehicle proportions are included in the analyses. The peak hour factors from the counts were used to analyze existing traffic conditions. Existing peak hour factors were also used for future traffic conditions.

The analysis includes identification and required modifications and improvements (if any) at intersections where the addition of background growth or background growth plus site-generated traffic volumes causes the following:

'Critical' intersections and movements for a signalized intersection include:

- V/C ratios for overall intersections operations, through movements, or shared through/turning movements increase to 0.85 or above;
- V/C ratios for exclusive movements increase to 0.95 or above; or
- 95th percentile queue length for individual movements that are projected to, or exceed, the storage length.

'Critical' intersections and movements for an unsignalized intersection include:

- Level of Services (LOS), based on average delay per vehicle, on individual movements exceeds LOS "E"; or
- Queue length for individual movements that exceeds the available queue storage.

There were no changes made to the calibration parameters from the synchro defaults. The following tables summarize the HCM capacity results for the study intersections during the weekday a.m. and p.m. peak hours under existing (2024), future background (2042) and future total (2042) traffic conditions. The detailed calculation sheets are provided in **Appendix E**.

7.1 Mountainview Road North and River Drive

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 3 Capacity analysis of Mountainview Road North and River Drive

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2024	Overall: 0.30 (A) 8 EBTLR = 0.05 (B) 17 WBTLR = 0.46 (B) 20 NBTL = 0.23 (A) 6 NBR = 0.09 (A) 6 SBTLR = 0.23 (A) 6	 EBTLR = 10 m WBTLR = 25 m NBTL = 25 m NBR = 5 m SBTLR = 20 m	Overall: 0.44 (A) 8 EBTLR = 0.04 (B) 17 WBTLR = 0.44 (B) 20 NBTL = 0.44 (A) 7 NBR = 0.09 (A) 6 SBTLR = 0.2 (A) 6	 EBTLR = 10 m WBTLR = 25 m NBTL = 45 m NBR = 5 m SBTLR = 15 m
Future Background 2042 (with modified NB and SB lane configuration)	Overall: 0.58 (B) 12 EBTLR = 0.23 (B) 17 WBTLR = 0.63 (C) 24 NBL = 0.16 (A) 7 NBT = 0.32 (A) 8 NBR = 0.13 (A) 7 SBL = 0.09 (A) 7 SBTR = 0.55 (A) 10	 EBTLR = 20 m WBTLR = 35 m NBL = 10 m NBT = 40 m NBR = 10 m SBL = 10 m SBTR = 80 m	Overall: 0.58 (B) 11 EBTLR = 0.15 (B) 17 WBTLR = 0.61 (C) 22 NBL = 0.36 (A) 8 NBT = 0.56 (A) 10 NBR = 0.13 (A) 7 SBL = 0.11 (A) 7 SBTR = 0.48 (A) 9	 EBTLR = 15 m WBTLR = 40 m NBL = 25 m NBT = 80 m NBR = 10 m SBL = 10 m SBTR = 65 m
Future Total 2042	Overall: 0.62 (B) 13 EBTLR = 0.45 (B) 18 WBTLR = 0.71 (C) 28 NBL = 0.41 (A) 10 NBT = 0.32 (A) 8 NBR = 0.13 (A) 8 SBL = 0.09 (A) 7 SBTR = 0.57 (B) 11	 EBTLR = 35 m WBTLR = 40 m NBL = 30 m NBT = 45 m NBR = 10 m SBL = 10 m SBTR = 85 m	Overall: 0.81 (B) 17 EBTLR = 0.19 (C) 21 WBTLR = 0.77 (C) 35 NBL = 0.83 (C) 25 NBT = 0.53 (B) 11 NBR = 0.13 (A) 8 SBL = 0.11 (A) 8 SBTR = 0.45 (A) 10	 EBTLR = 25 m WBTLR = 80 m NBL = 105 m NBT = 80 m NBR = 10 m SBL = 10 m SBTR = 65 m

Existing Traffic Conditions

Under existing conditions in 2024, the intersection of Mountainview Road North and River Drive operates efficiently with minimal delays during both peak periods. In the a.m. peak hour, the intersection performs with an overall v/c ratio

of 0.30 with a LOS A and an average delay of 8 seconds. The westbound through-left-right movement is reporting the longest 95th percentile queue at 25 metres while all other movements are reporting very low v/c ratios and short queues.

In the p.m. peak hour, the intersection also operates well, with an overall v/c ratio of 0.44, LOS A, and with delays averaging 8 seconds. Similar to the a.m. peak hour, the westbound approach is reporting the longest 95th percentile with a queue length of 45 metres during the p.m. peak hour and the operation of the intersection remains well within acceptable limits.

Overall, the intersection shows no critical movements or significant queuing under existing traffic volumes.

Future Background Traffic Scenario

Under the 2042 future background traffic scenario, with the addition of background development traffic and corridor growth, the intersection is reported to continue to operate at acceptable levels although some minor increases in delay and queuing are reported.

In the a.m. peak hour, the overall v/c ratio increases to 0.58, resulting in a LOS B and an average delay of 12 seconds. The westbound approach remains the most congested with a v/c ratio of 0.63 LOS C, with a queue length of 35 metres. A reconfiguration of the northbound and southbound approach is proposed based on the recommendations of the Rosetta Traffic Study to include separate left, though, and right turn lanes for the northbound approach and a separate left and shared through/right-turn lane for the southbound approach, resulting in moderate increases the v/c ratios and delays.

In the p.m. peak hour, the overall intersection's v/c ratio increases to 0.58 LOS B. The westbound approach continues to experience higher traffic volumes, with a v/c ratio of 0.61, while the northbound through movement sees a v/c ratio of 0.56, indicating a moderate increase in congestion but with the intersection still reported to operate within acceptable limits.

Although queue lengths increase, particularly for the westbound and northbound and southbound approaches, the intersection as a whole continues to operate with acceptable v/c ratios and delays, with no critical movements under the future background traffic scenario.

Future Total Traffic Scenario

Under the 2042 future total traffic scenario, which includes the background development traffic and corridor growth from the future background scenario in addition to the site-generated traffic, the intersection is reported to continue to perform within acceptable limits, although with some increases in v/c ratios and queue lengths reported.

During the a.m. peak hour, the overall v/c ratio increases slightly to 0.62 LOS B. The westbound through-left-right movement is reported to increase to a v/c ratio of 0.71 LOS C, indicating that it is approaching capacity, but remains within operational thresholds. The northbound left-turn lane reports a moderate v/c ratio of 0.41, which is within acceptable levels, while the northbound through lane operates with a v/c ratio of 0.32 LOS A.

During the p.m. peak hour, the overall v/c ratio rises to 0.81 LOS B. The westbound approach is reporting a v/c ratio of 0.77 LOS C, and the northbound left-turn movment increases to a v/c ratio of 0.83 LOS C. The northbound through lane operates with a v/c ratio of 0.53 LOS B, accommodating the additional site traffic while still performing within acceptable limits. The intersection as a whole remains functional and can accommodate future traffic without requiring improvements.

Overall, the capacity analysis demonstrates that the planned intersection configuration for Mountainview Road North and River Drive will operate efficiently through 2042, even with the additional traffic generated by the proposed development. Therefore, no improvements are recommended for the intersection to accommodate the subject site.

7.2 Mountainview Road North and John Street

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 4 Capacity analysis of Mountainview Road North and John Street

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2024	EBTLR = 0.14 (A) 9 WBTLR = 0.06 (A) 9 NBL = 0.08 (A) 8 NBTR = 0.32 (A) 10 SBL = 0.01 (B) 8 SBTR = 0.63 (A) 15	EBTLR = 0 m WBTLR = 0 m NBL = 0 m NBTR = 0 m SBL = 0 m SBTR = 0 m	EBTLR = 0.13 (A) 9 WBTLR = 0.1 (A) 9 NBL = 0.12 (A) 8 NBTR = 0.53 (B) 13 SBL = 0.02 (A) 8 SBTR = 0.42 (B) 11	EBTLR = 0 m WBTLR = 0 m NBL = 0 m NBTR = 0 m SBL = 0 m SBTR = 0 m
Future Background 2042	EBTLR = 0.24 (B) 11 WBTLR = 0.11 (B) 11 NBL = 0.13 (A) 10 NBTR = 0.52 (B) 14 SBL = 0.02 (A) 8 SBTR = 1.00 (F) 56	EBTLR = 0 m WBTLR = 0 m NBL = 0 m NBTR = 0 m SBL = 0 m SBTR = 0 m	EBTLR = 0.22 (B) 11 WBTLR = 0.16 (B) 11 NBL = 0.19 (A) 10 NBTR = 0.85 (D) 32 SBL = 0.03 (A) 9 SBTR = 0.68 (C) 20	EBTLR = 0 m WBTLR = 0 m NBL = 0 m NBTR = 0 m SBL = 0 m SBTR = 0 m
Future Total 2042	EBTLR = 0.24 (B) 11 WBTLR = 0.11 (B) 11 NBL = 0.13 (A) 10 NBTR = 0.52 (B) 14 SBL = 0.02 (A) 8 SBTR = 1.00 (F) 56	EBTLR = 0 m WBTLR = 0 m NBL = 0 m NBTR = 0 m SBL = 0 m SBTR = 0 m	EBTLR = 0.22 (B) 11 WBTLR = 0.16 (B) 11 NBL = 0.19 (A) 10 NBTR = 0.85 (D) 32 SBL = 0.03 (A) 9 SBTR = 0.68 (C) 20	EBTLR = 0 m WBTLR = 0 m NBL = 0 m NBTR = 0 m SBL = 0 m SBTR = 0 m

Existing Traffic Conditions

Under existing conditions in 2024, the intersection of Mountainview Road North and John Street operates satisfactorily with low capacity and minimal queuing delays of 15 seconds or less during the a.m. and the p.m. peak hour.

Future Background Traffic Scenario

With the addition of corridor growth and background traffic under the 2042 future conditions, the southbound through-right movement becomes critical during the a.m. peak hour, with a v/c ratio of 1.00 and a LOS of F. All other movements during the a.m. peak hour operate satisfactorily, with low capacity and minimal queuing delays of 14 seconds or less.

During the p.m. peak hour, the northbound through-right movement becomes critical with a v/c ratio of 0.85 and a LOS of D. The southbound through-right is also approaching critical condition with a v/c ratio of 0.68 and a LOS of C. All other movements during the p.m. peak hour operate satisfactorily, with low capacity and minimal queuing delays of 11 seconds or less.

Future Total Traffic Scenario

Under future total traffic scenario, the southbound through-right continues being critical with a v/c ratio of 1.00 and a LOS of F. All other movements during the a.m. peak hour operate satisfactorily, with low capacity and minimal queuing delays of 14 seconds or less.

During the p.m. peak hour, the northbound through-right movement becomes critical with a v/c ratio of 0.85 and a LOS of D. The southbound through-right is also approaching critical condition with a v/c ratio of 0.68 and a LOS of C and a delay of 20 seconds. All other movements during the p.m. peak hour operate satisfactorily, with low capacity and minimal queuing delays of 11 seconds or less.

Traffic signal warrant using the Ontario Traffic Manual (OTM) Book 12 Justification 7 Projected Volumes was completed for this intersection and the warrant results are provided in the **Appendix**. The signal warrant shows that traffic signals are not warranted for this intersection.

As there is no site traffic assigned to this intersection, no improvements have been recommended at this intersection to accommodate the subject site.

7.3 River Drive and Daniela Court

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 5 Capacity analysis of River Drive and Daniela Court

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2024	EBTL = 0 (A) 0 WBTR = 0.02 (A) 0 SBLR = 0.01 (A) 9	EBTL = 5 m WBTR = 0 m SBLR = 5 m	EBTL = 0 (A) 1 WBTR = 0.04 (A) 0 SBLR = 0.01 (A) 9	EBTL = 5 m WBTR = 0 m SBLR = 5 m
Future Background 2042	EBTL = 0 (A) 0 WBTR = 0.06 (A) 0 SBLR = 0.02 (B) 11	EBTL = 5 m WBTR = 0 m SBLR = 5 m	EBTL = 0 (A) 0 WBTR = 0.14 (A) 0 SBLR = 0.03 (B) 11	EBTL = 5 m WBTR = 0 m SBLR = 5 m
Future Total 2042	EBTL = 0 (A) 0 WBTR = 0.06 (A) 0 SBLR = 0.02 (B) 11	EBTL = 5 m WBTR = 0 m SBLR = 5 m	EBTL = 0 (A) 0 WBTR = 0.14 (A) 0 SBLR = 0.03 (B) 11	EBTL = 5 m WBTR = 0 m SBLR = 5 m

Existing Traffic Conditions

Under existing conditions in 2024, the intersection of River Drive and Daniela Court operates satisfactorily with low capacity and minimal queuing delays of 9 seconds or less during the a.m. and the p.m. peak hour.

Future Background Traffic Scenario

With the addition of corridor growth for the 2042 future background traffic scenario, the intersection of River Drive and Daniela Court operates satisfactorily with low capacity and minimal queuing delays of 11 seconds or less during both the a.m. and the p.m. peak hour.

Future Total Traffic Scenario

There is no site traffic added to the intersection so there is no change in v/c and delay in Future total from Future Background for this intersection. The intersection continues to operate with low capacity and minimal delays of 11 seconds or less during both the a.m. and the p.m. peak hour.

No improvements have been recommended at this intersection to accommodate the subject site.

7.4 Mountainview Road North and Street A

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in **Table 6**.

Table 6 Capacity analysis of Mountainview Road North and Proposed Site Access

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2042	EBR = 0.37 (B) 14 NBT = 0.29 (A) 0 NBT = 0.29 (A) 0 SBT = 0.31 (A) 0 SBTR = 0.16 (A) 0	EBR = 15 m NBT = 0 m NBT = 0 m SBT = 0 m SBTR = 0 m	EBR = 0.26 (B) 13 NBT = 0.35 (A) 0 NBT = 0.35 (A) 0 SBT = 0.29 (A) 0 SBTR = 0.15 (A) 0	EBR = 10 m NBT = 0 m NBT = 0 m SBT = 0 m SBTR = 0 m

Under future total traffic conditions, the proposed intersection of Mountainview Road North and Street A is expected to operate efficiently with low delays and queuing for both the a.m. and the p.m. peak hour.

7.5 River Drive and Street A

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 7 Capacity analysis of River Drive and Site Access

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2042	EBTR = 0.12 (A) 0 WBTL = 0.07 (A) 4 NBLR = 0.09 (A) 10	EBTR = 0 m WBTL = 5 m NBLR = 5 m	EBTR = 0.09 (A) 0 WBTL = 0.20 (A) 5 NBLR = 0.03 (A) 9	EBTR = 0 m WBTL = 5 m NBLR = 5 m

Under future total traffic conditions, the proposed intersection of River Drive and Street A is expected to operate efficiently with low delay and queuing for both the a.m. and the p.m. peak hour.

8. Auxiliary Lanes

The Ministry of Transportation's Design Supplement for the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads provides guidance on the assessment and/or need for auxiliary left-turn lanes at intersections.

GHD completed a left-turn lane warrant for the intersection of River Drive and Street A using the projected 2042 a.m. and p.m. peak hour traffic volumes to determine if a left-turn lane is warranted.

Based on the projected 2042 traffic volumes using the graph representing the left turns consisting of 40% of the advancing volume, a left-turn lane is not warranted under the a.m. peak hour but is warranted during the p.m. peak hour.

In assessing the feasibility of introducing a left-turn lane at the proposed intersection along a two-lane collector road, several factors were considered, including future capacity, local roadway context, physical constraints, and safety impacts. While the left-turn lane is technically warranted under 2042 p.m. peak hour volumes, a left-turn lane is not recommended in this context for the following reasons:

- The intersection's performance was analyzed under future 2042 traffic volumes, with a particular focus on the p.m. peak hour when the left-turn lane is warranted. The results indicate that all movements remain well within acceptable capacity levels with minimal delay, as follows:
    - Eastbound Through/Right: V/C ratio of 0.12 with an LOS of A and delay of 0 seconds.
    - Westbound Through/Left: V/C ratio of 0.07 with an LOS of A and a delay of 4 seconds.

- Northbound Left/Right: V/C ratio of 0.09 with an LOS of A and a delay of 10 seconds.

Given these values, the intersection operates at LOS A across all movements, demonstrating high efficiency and minimal delays with the 95th percentile queues not exceeding one vehicle.

- The collector road's function as a lower-speed, two-lane roadway inherently supports safer left-turn movements, as vehicle speeds are more controlled, especially with the existing speed humps located west of Daniela Court. The reduced speed environment minimizes the potential risk typically associated with left-turning vehicles and decreases the likelihood of congestion, as vehicles can adjust their speeds to take advantage of gaps in the traffic flow more safely.
- The physical constraints of the existing right-of-way limit the ability of adding a left-turn lane without impacting existing infrastructure. Widening the road would require significant modifications to the current infrastructure, likely impacting adjacent properties and the existing streetscape. As such, the physical limitations of the road make introducing a left-turn lane impractical without major roadway reconfiguration, which would conflict with maintaining the road's existing footprint and character.
- The low volume-to-capacity ratios and minimal delays illustrate that the operation of the intersection is largely unaffected by the absence of a left-turn lane. Furthermore, the cost of expanding the pavement width of River Drive to accommodate a dedicated turn lane is unjustifiable when the performance analysis shows that a left-turn lane would contribute minimally to the intersection's overall safety or efficiency. Maintaining the existing configuration supports a cost-effective approach, preserving the public realm without compromising safety.

In summary, due to the limited capacity demands, physical constraints, the road's lower-speed and existing function as a collector road, introducing a left-turn lane is neither necessary nor practical. This decision aligns with efficient and cost-effective transportation planning, ensuring that the intersection meets projected future demands while preserving the roadway's intended function and character.

9. Proposed Cross Section for Street A

The Town has identified the proposed Street A as a collector road to support the anticipated density of the surrounding developments. However, they have agreed to a reduced right-of-way, accepting a 20-metre width typically designated for a local road. The Town's 20-metre cross section, illustrated in **Figure 12**, includes provisions for vehicular lanes, pedestrian pathways, and essential utilities.

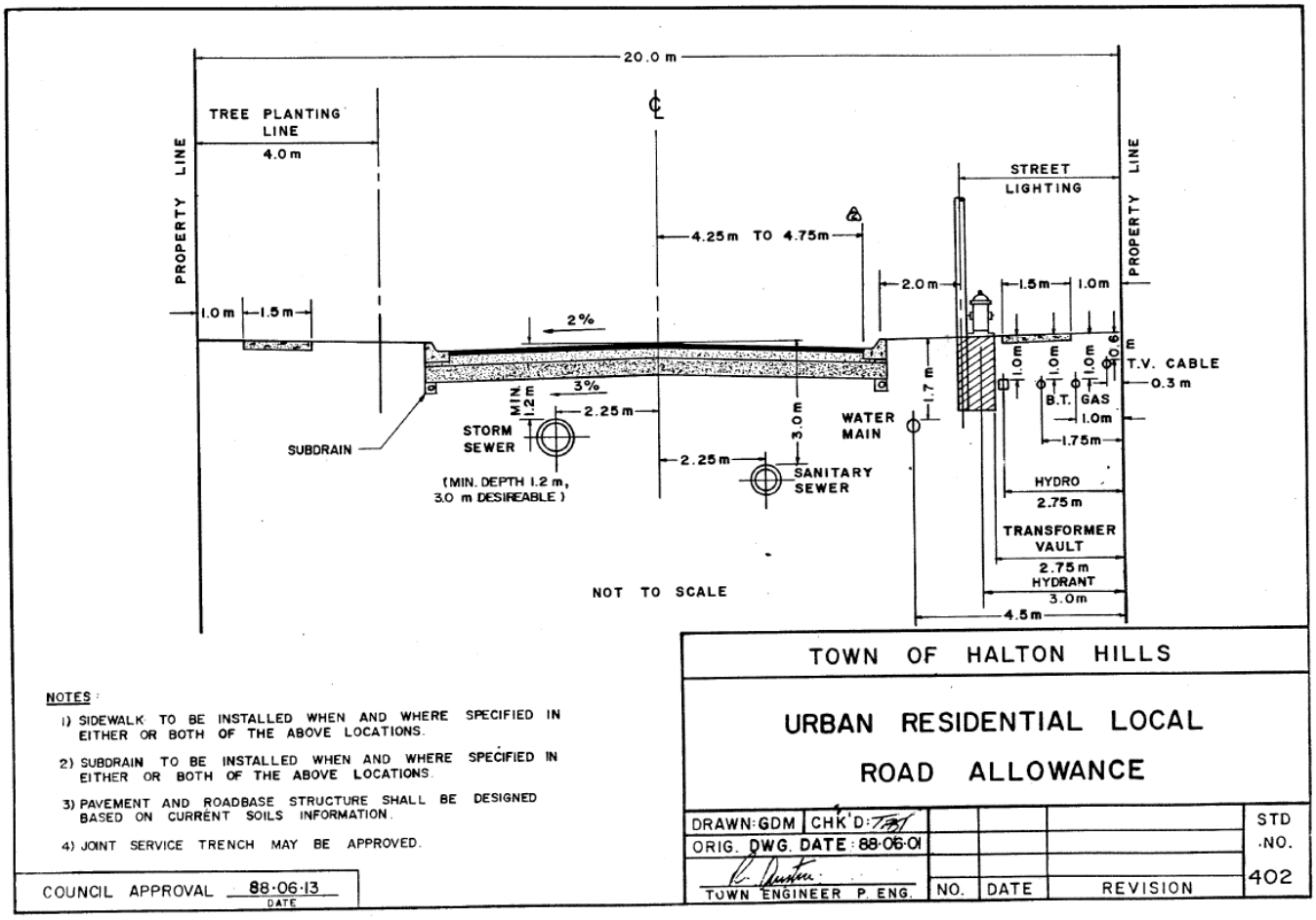

Figure 12 Halton Hills 20 Metre Local Road Cross Section

This design is expected to adequately serve projected traffic volumes, balancing the needs of motor vehicles, cyclists, and pedestrians in a compact, efficient layout. The two-lane configuration provides sufficient capacity for collector road demands while maintaining a pedestrian-friendly environment that includes sidewalks on both sides of the roadway and parking on one side of the road. The 20-metre cross section also allows flexibility for future enhancements, such as street furniture or traffic-calming features, enabling the Town to adapt to evolving transportation needs as development continues. This approach aligns with long-term planning goals, ensuring that Street A can handle both immediate and future community demands without requiring additional right-of-way widenings.

10. Intersection and Site Access Review

10.1 Street A Intersections

According to the Transportation Association of Canada (TAC) Chapter 9 Intersection, the recommended minimum required spacing is as follows:

- Local Roads: As stated in TAC Section 9.4.2.3, the recommended minimum spacing for four-legged intersections is 60 metres, and 40 metres if the adjacent intersection is three-legged.
- Arterial Roads: As stated in TAC Section 9.4.2.2, the recommended minimum spacing for a right-in/out intersection on an arterial road is 100 metres from an adjacent intersection.

The proposed new intersection on River Drive is approximately 90 metres from the Mountainview Road North/River Drive intersection which exceeds the recommended TAC spacing.

The proposed right-in/out intersection along Mountainview Road North is located approximately 140 metres from the Mountainview Road North/River Drive intersection which also exceeds the recommended TAC spacing.

10.2 Access Management

According to the Transportation Association of Canada (TAC) Chapter 8 Access, a minimum corner clearance of 15 metres is recommended for access points from an intersection along local roads. Street A has several access points, detailed as follows:

- Circular driveway leading to Tower A, B and C is 50 metres from the River Drive/Street A intersection.
- Circular driveway leading to Tower F is located over 60 metres from the River Drive/Street A intersection.
- Circular driveway leading to Tower D is located over 15 metres from the Mountainview Road North/Street A intersection.

Therefore, the minimum corner clearance of 15 metres is met for all access points along Street A from adjacent intersections.

TAC guidelines specify a minimum clear throat length of 25 metres for apartments with more than 200 dwelling units. The proposed clear throat lengths for the site have been designed to accommodate anticipated vehicle movements while considering site-specific conditions. Although the TAC guidelines recommend a minimum 25-metre clear throat length, those accesses which provide shorter distances in the current design are expected to function effectively without significantly impacting vehicles entering the site or causing blockages along Street A as there are no obstructions or design elements within the 25-metre area that would impede traffic from entering the site.

All proposed site accesses along Street A have been designed with a curb radii of 8 metres which meets the Town's minimum requirements for a local residential street intersection from the Town of Halton Hills Engineering and Public Works Subdivision Manual.

It is our understanding based on a review of the Town of Halton Hills Engineering and Public Works Subdivision Manual that the Town requires whenever possible, that the Ontario Provincial Standard Drawings (OPSD) shall be used for design. All site accesses along Street A have been revised against OPSD 350 and confirmed that they meet the minimum 7.2 metre driveway width and 4.5 metre curb radii.

11. Sightline Assessment

River Drive, adjacent to the proposed site, has a posted speed limit of 50 km/h and a change in vertical profile of the road due to a crest in the road located west of Daniela Court.

For the purpose of this assessment, a design speed of 60 km/h was used for the westbound direction based on the 50 km/h posted speed limit. However, approximately 20 metres west of Daniela Court there is a speed bump. When encountering a speed hump on a road with a posted speed limit of 50 km/h, vehicles typically slow as they pass over the hump depending on its design (height, width, and type). Drivers usually reduce speed to maintain comfort and avoid potential vehicle damage, as higher speeds over a speed hump can be uncomfortable and cause damage to the vehicle. For standard speed humps, this speed reduction is common, encouraging a brief but significant reduction in speed to enhance pedestrian safety and traffic calming and therefore, for traffic travelling in the eastbound direction on River Drive, GHD assumed an operating speed of 35 km/h (a reduction of 15 km/h from the posted speed limit).

Per Transportation Association of Canada's Geometric Design Guide for Canadian Roads (TAC GDGCR) Table 2.5.2, the minimum stopping sight-distance for a roadway with a design speed of 60 km/h is 85 metres. For an operating speed of 35 km/h (eastbound direction with reduced speeds), the minimum stopping sight-distance is less than 50 metres.

Section 9.9 of the TAC GDCR provides intersection sight distances for different scenarios, with the following scenarios used to complete the intersection sight distance analysis:

- Case B1 – Left turn from the minor road
- Case B2 – Right turn from the minor road
- Case F – Left turns from the major road

It should be noted that the stopping sight distance was measured used in the analysis assumed an object height of 0.60 metre from the pavement and was completed by measuring the available sight distances in the field.

A vehicle entering the major road (Mountainview Road North and River Drive) from Street A is assumed to stop approximately 4.5 metres to the pavement edge of the major road as recommended by TAC. In this stopped position, the driver will be required to look left and right in order to perceive and react to approaching vehicles prior to initiating a turning movement onto Street A.

The required intersection sight distances are provided in TAC GDGCR Tables 9.9.4, 9.9.6 and 9.9.12 for passenger vehicles turning left from stop, turning right from stop, or turning left from the major road, respectively, and are summarized in the following table. The required intersection sight distances summarized in the tables below are based on a 60 km/h design speed along Mountainview Road North and River Drive travelling westbound and 35 km/h on River Drive travelling eastbound.

Table 8 Sightline Assessment Review

Case (Design Speed of 60 km/h)	Required Intersection Sight Distance for Passenger Cars (TAC 2017)	Available Intersection Sight Distance (Mountainview Road North)	Available Intersection Sight Distance (River Drive)	TAC Reference
B1: Vehicles turning left from stop	73 m (looking west on River Drive) * 125 m (looking east on River Drive)	N/A	73 m (looking west towards Daniela Court) >125 m (looking east towards Mountainview Road North)	Table 9.9.4
B2: Vehicles turning right from stop	64 m (looking west on River Drive) * 110 m (looking north on Mountainview Road North)	>125 m (looking north towards Mountainview Road North)	73 m (looking west towards Daniela Court) >150 m (looking east towards Mountainview Road North)	Table 9.9.6
F: Left turns from the major road	95 m (looking west on River Drive)	--	>73 m (looking west towards Daniela Court)	Table 9.9.12

*Note: Sight distance based on reduced eastbound speed of vehicles to 35 km/h on River Drive as a result of speed hump

11.1 Mountainview Road North and Street A

The Mountainview Road North right-in/out intersection provides more than the required 125 metres of sightline looking north on Mountainview Road North to allow a vehicle to make the right turn as illustrated in the following figures.

Figure 13 Intersection Sight Distance on Mountainview Road North

Figure 14 Observed Sightline Looking North on Mountainview Road North

11.2 River Drive and Street A

The following figures illustrate the available sightline using a driver's eye height measured to a vehicle tail or brake light (at 0.60 m above pavement).

Figure 15 Intersection Sight Distance on River Drive

Figure 16 Observed Sightline Looking West on River Drive towards Daniela Court

Figure 17 Observed Sightline looking east on River Drive towards Mountainview Road North

The River Drive site intersection allows full turning movements onto River Drive. Based on the assessment, there will be more than 200 metres of available sightline distance looking to the east towards Mountainview Road North. However, the crest on River Drive west of Daniela Crescent restricts visibility to the west from the intersection locations.

Recognizing the need to slow existing traffic down given the existing condition and location of the Daniela Court intersection, the town installed a speed bump located 20 metres west of Daniela Court to effectively slow vehicles on River Drive. The reduced speed lowers the required stopping sight distance from 125 metres to approximately 73 metres if the operating speed of the eastbound travelling vehicles is assumed to be approximately 35 km/h.

At this speed, there is sufficient intersection sight distance available for the intersection movements in both directions.

Additionally, evaluating the sightlines with the top of the vehicle measured at 1.3 metres form the top of pavement, the available sightlines increase to beyond 100 metres. This improved line of sight means that drivers attempting to turn left or right onto River Drive will be able to see a vehicle approaching from a much longer distance and will have more time to perceive and react to vehicles driving approaching on River Drive. This enhanced visibility is particularly beneficial in managing safe movements at the crest near Daniela Court, where visibility is naturally limited. This approach is acceptable as it aligns with sight distance guidelines within urban conditions where street lighting is available. Using this height allows the assessment to more accurately represent a realistic driver's view of approaching or departing vehicles, providing a more practical assessment of available visibility. This approach is commonly accepted in traffic engineering when standard sight distance guidelines need to be supplemented by considering the visible portion of approaching vehicles.

12. Parking Review

The minimum Zoning By-law requirements are found in the Town of Halton Hill's Zoning By-Law 2010-0050 and provides the minimum parking requirements for vehicular parking, accessible parking, bicycle parking, and loading spaces.

12.1 Vehicle Parking

Vehicular parking requirements and are found in Section 5.3 for residential parking requirements and Section 5.4 for non-residential parking requirements.

The minimum parking requirements for the subject site is summarized in the following table.

Table 9 Zoning By-law 2010-0050 Minimum Parking Requirement Rates

Unit Type	Unit Count/GFA	By law Rate	Parking Requirement
Residents	1,481 Dwelling Units	1.5 Parking Spaces per Unit	2,222 parking spaces
Visitors		0.25 Parking Spaces per Unit	370 parking spaces
Commercial	525 m^2	1 Parking Space per 20 m^2	27 parking spaces
		TOTAL	**2,619**

Under the Town Zoning By-Law 2010-0050, the subject site is required to provide a minimum of 2,619 parking spaces.

12.2 Barrier Free Parking

The current The Town of Halton Hills Zoning By-Law 2005-0117 provides the minimum barrier free parking requirement. The barrier free parking requirement are as follows:

- 0-12 parking spaces: 1 barrier free space
- 13 – 100 parking spaces: 4% of the total number of parking spaces, rounding up to the nearest whole number.

- 101 – 200 parking spaces: 1 plus 3% of the total number of parking spaces, rounding up to the nearest whole number.
- 201 – 1000 parking spaces: 2 plus 2% of the total number of parking spaces, rounding up to the nearest whole number.
- More than 1,000: 11 plus 1% of the total number of parking spaces, rounding up to the nearest whole number.

The required number of accessible parking spaces is calculated per building based on the following parking stats:

- Parcel A (Buildings A, B and C) with a total of 670 parking spaces – 16 accessible spaces
- Parcel B (Buildings D and E) with a total of 413 parking spaces – 11 accessible spaces
- Parcel C (Buildings F and G) with a total of 398 parking spaces – 10 accessible spaces

Based on the total parking number of parking spaces, a total of 37 accessible parking spaces are required.

12.3 Bicycle Parking

The minimum requirement for bicycle parking spaces is found in Town of Halton Hills' Zoning By-law 2010-0050, with the minimum bicycle parking requirement found in Table 5.6. The minimum By-law requirements for bicycle parking for the subject site is as follows:

- Retail
    - 2 spaces + 1 space / 1000 m^2 GFA

The minimum bicycle parking By-law requirement for the subject site is as follows:

- Retail
    - 2 spaces + 615 m^2 / 1000 m^2 x 1 space = 3 bicycle parking spaces

In total, 3 bicycle parking spaces are required under the Town of Halton Hill's Zoning By-law 2010-0050. There is no bicycle parking spaces required for residential use.

12.4 Loading Space

The minimum requirement for loading spaces is found in Town of Halton Hills' Zoning By-law 2010-0050, with the minimum loading space requirements found in Table 5.4. The minimum By-law requirements for loading space for the subject site is as follows:

- Retail: 301 m^2 – 1,850 m^2 requires 1 loading space.

Based on the proposed 525 m^2 of commercial floor space, a total of one loading space is required.

12.5 Proposed Parking and Loading Provisions

The following table summarizes the minimum By-Law requirements and the proposed parking supply for the subject site.

Table 10 Parking Requirements and Provisions

Type	GFA	By Law Rate/Bill 185 Requirement	Minimum By law Requirement/Bill 185	Provided
Vehicle Parking Residents	1,481 dwelling units, 550 m^2 of retail space	1.5 per unit/No requirement	2,222 vehicle parking spaces/0 vehicle parking spaces	1,481 parking spaces
Vehicle Parking Visitors		Minimum of 0.25 spaces per dwelling unit/ No requirement	Minimum of 370 vehicle parking spaces/0 vehicle parking spaces	
Vehicle Parking Retail		No requirement/No requirement	0 vehicle parking spaces/0 vehicle parking spaces	
Accessible Parking		Rate varies based on the number of parking spaces required by By-law	37 accessible parking spaces	37 accessible parking spaces
Bicycle Parking		Retail: 2 spaces plus 1 space / 1000 m^2 GFA	Minimum of 3 bicycle parking spaces	1,037 long term resident parking spaces and 34 short term visitor parking spaces
Loading Spaces		Retail: 301 m^2 to 615 m^2: 1 loading space	1 Loading Space	6 Loading Spaces

The proposed development is proposing a parking supply of approximately 0.90 spaces per unit for residents which is supported by Transportation Tomorrow Survey (TTS) data, which shows that approximately 18 percent of apartment households in Georgetown do not own a vehicle. The proposed parking supply satisfies the newly introduced Bill 185 minimum requirement for vehicle parking, and the Town's Zoning By-law requirements for barrier free spaces, bicycle parking, and loading spaces.

The proposed visitor parking rate of 0.10 spaces per unit is appropriate for this development, given the total number of residential units. With a large number of units, the total visitor parking supply scales to a sufficient amount to accommodate expected demand while preventing an oversupply of spaces that would consume valuable land. With planned on-site amenities and proximity to Georgetown GO Station, the development encourages alternatives to vehicle use, reducing the overall need for extensive visitor parking. This approach provides a balanced, efficient allocation of visitor spaces while aligning with sustainable development goals and the modern transportation preferences of the community. Additionally, on-street public parking could be available along one side of Street A to further support the ground floor commercial and provide some additional visitor parking demand.

The proposed sharing of the commercial visitor and residential visitor spaces is consistent with the idea that the ground floor commercial uses proposed as part of a mixed-use sites in dense urban environments will in time be primarily considered ancillary to the local areas as population increases and, as such are intended to service the needs of local residents within walking distance to the development and not expected to generate a substantial outside parking demand. If the non-residential uses however where to generate a demand for parking, this can be accommodated within the proposed residential visitor spaces which is appropriate for a mixed-use urban area.

13. Parking Assessment

Providing off-street residential parking influences a commuter's choice on whether to drive or choose alternate forms of transportation. Providing more parking in general leads to a higher percentage of auto ownership and auto usage as well. Changing travel behaviour is best done when a prospective buyer is looking to purchase a unit and providing the opportunity for a prospective buyer to easily purchase a parking space either through making it affordable, at no additional cost, or having an excess in number of spaces available to purchase can introduce travel behaviour into an area that once established is hard to change.

Municipalities within the GTA have begun to assist developers in helping to change travel behaviour by reducing or eliminating parking within areas with higher order transit stations.

The proposed development will be heavily marketed to prospective purchasers who do not own a vehicle and do not require a vehicle for commuting or discretionary trips and the limited number of parking spaces will be explicitly noted in any promotional material.

Sustainable transportation is a crucial component of achieving climate change adaptation and environmental protection goals and reducing traffic related air pollutant and greenhouse gas emissions.

13.1 Policy Justification

13.1.1 Ontario's Five-Year Climate Change Action Plan

The purpose of Ontario's Climate Change Action Plan, announced in 2016, is to address climate change through transportation and land-use measures. The plan aims to reduce emissions, create more livable, mixed-use communities, and prioritize addressing climate change at the municipal level.

In terms of development, the plan outlines key actions such as supporting cycling and walking, reducing single-passenger vehicle trips, and eliminating minimum parking requirements. These actions are aimed at promoting alternative modes of transportation and creating complete, compact, and mixed-use communities. The elimination of minimum parking requirements is also a change in perspective toward auto-ownership and travel and is becoming a more common in urban areas as population increases, transit expands, and auto-ownership declines.

The concept of eliminating the minimum parking requirements for high density buildings in areas with access to public transportation is not a new concept in North America. Examples of such developments can be found in a variety of cities including Toronto, London, Brampton, Oakville, Ottawa, Calgary and Vancouver.

As the population of Mississauga continues to grow, especially in areas located within the Hurontario Street corridor with targeted intensification such as the subject site, transit infrastructure expands across the city, and personal vehicle ownership declines, more residential buildings with reduced parking standards relative to the Zoning By-law requirements is becoming more commonplace.

13.1.2 Provincial Policy Statement - 2024

The reduced parking supply is consistent with the Provincial Policy Statement-2024 (PPS). Sections 2.4.1, 2.4.2, and 3.2 of the Provincial Planning Statement, 2024 emphasizes strategic, transit-oriented growth and infrastructure optimization. Section 2.4.1 focuses on Strategic Growth Areas, encouraging compact, mixed-use developments in

designated zones to support transit viability and efficient land use. Section 2.4.2 addresses Major Transit Station Areas, promoting higher densities and reducing surface parking near transit hubs to foster active transportation and minimize vehicle dependence. Section 3.2 highlights the importance of coordinating transportation and land use planning to create a seamless, multimodal transportation network, supporting connectivity between modes and enhancing infrastructure efficiency across urban areas.

Together, these sections guide sustainable growth that leverages transit, optimizes infrastructure, and integrates transportation and land use to support a connected and resilient community.

13.1.3 Metrolinx 2041 Regional Transportation Plan

The reduced parking is consistent with the Metrolinx 2041 Regional Transportation Plan (RTP) which aims to put traveller needs at the core of planning and operations by providing even more people with fast, frequent and reliable transit; design communities, transit stations and Mobility Hubs to support transit use and active transportation; and using parking demand strategies to encourage car-sharing and other modes besides the car.

The RTP specifies that through secondary plans, zoning bylaws and development applications, the land use planning process can help to minimize parking demands by ensuring that residential and commercial sites support walking, cycling, car-sharing, and transit use.

13.2 TTS Vehicle Ownership

GHD has also reviewed the 2016 TTS data of vehicle ownership per apartment dwelling units in the zones surrounding zones the subject site as illustrated in the figure below.

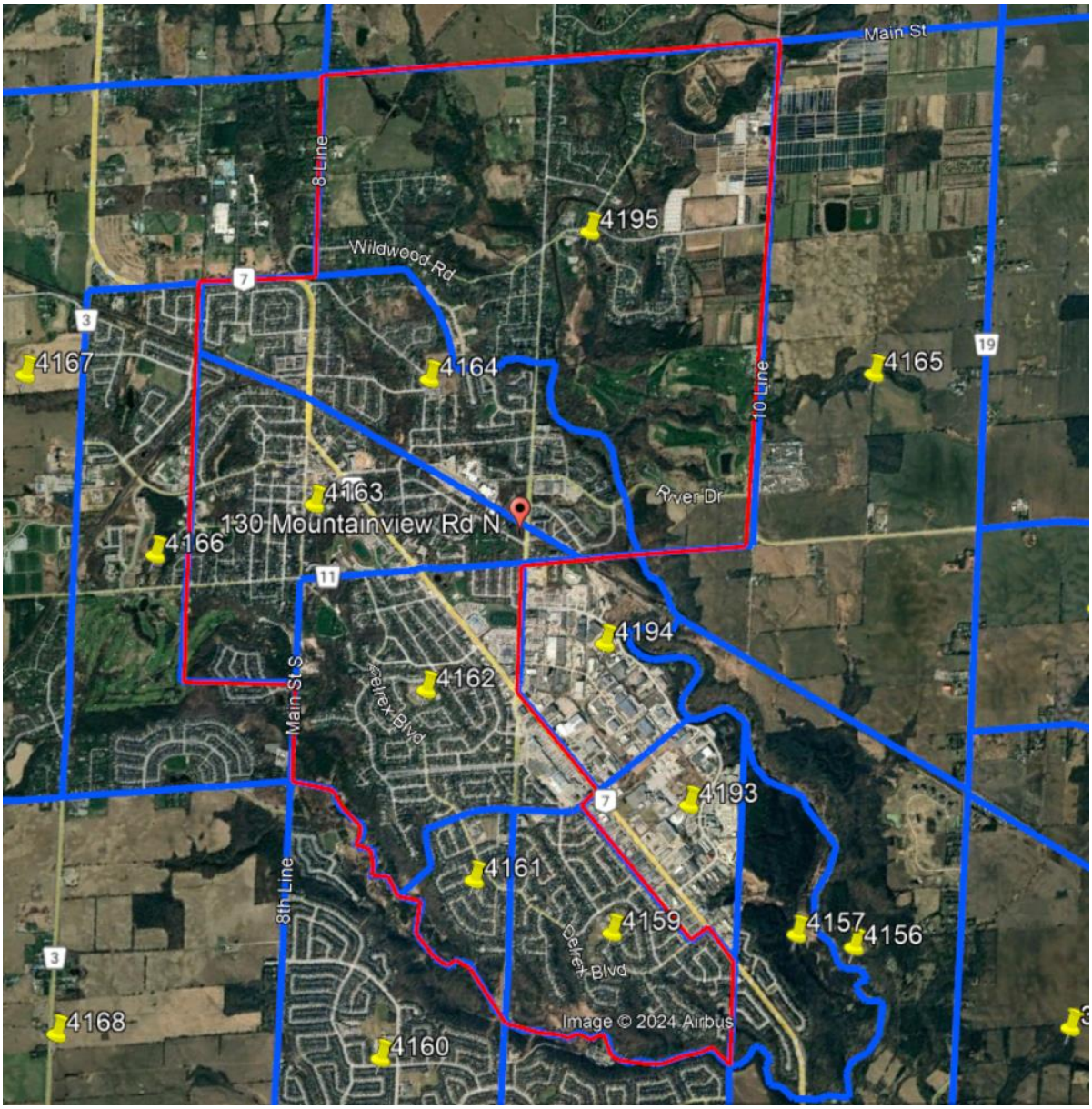

Figure 18 TTS Zones Selected for Vehicle Ownership Data

Table 11 TTS Vehicle Ownership TTS Data for Apartments Units

Vehicles per Household	Number of Households	Total number of vehicles	Household % Vehicle/Household
0 vehicles	272	0	18.7%
1 vehicle	997	997	68.3%
2 vehicles	159	318	10.9%
3 vehicles	30	90	2.1%
Total	**1,458**	**1,405 (0.96 vehicles per household)**	**100%**

The 2016 TTS data shows that currently 18.7% of apartment households in the Town do not own a vehicle and consequently to not require a parking space.

This trend reflects a growing shift towards reduced vehicle ownership, particularly in areas near GO Stations which can offer convenient alternatives to driving. Additionally, rideshare services like Uber and Lyft have become popular, providing flexible, on-demand travel options.

Additionally, the site's planned Transportation Demand Management (TDM) measures, including enhanced pedestrian connections, bicycle parking, and transit incentives, further reduce the need for high vehicle parking ratios.

13.3 Rideshare Services

Rideshare services such as Uber, Lyft, and other competitors have emerged as a viable alternative that provides residents with choices to avoid the necessity of purchasing a personal vehicle. By utilizing rideshare platforms, individuals can access convenient transportation without the financial burdens of car ownership, including purchasing, maintenance, insurance, and parking costs.

This approach not only offers significant cost savings but also aligns with environmentally conscious lifestyles, reducing the overall carbon footprint associated with personal vehicle usage. Rideshare services also cater to diverse travel needs, offering options ranging from solo rides to shared trips, promoting efficient resource utilization.

With the ease of smartphone app access, users can summon rides on-demand, making them a flexible and time-efficient solution for daily commuting, errands, and social activities. As urban areas strive for improved traffic flow and reduced congestion, rideshare services have become a pivotal component of a modern, sustainable transportation ecosystem, granting residents the freedom to navigate their surroundings without the commitment of vehicle ownership.

13.4 Bill 185 – Cutting Red Tape to Build More Homes Act, 2024

Bill 185, Cutting Red Tape to Build More Homes Act, 2024, received Royal Assent on June 6th, 2024. The Bill made various amendments to the Planning Act, including the inability of a municipality's Official Plan or Zoning By-law to require parking (with the exception of bicycle parking) on land that is not part of a highway and that is located within:

- a Protected Major Transit Station Area (PMTSA) identified in accordance with subsection (15) or (16);
- an area delineated in the official plan of the municipality surrounding and including an existing or planned higher order transit station or stop, within which area the official plan policies identify the minimum number of residents and jobs, collectively, per hectare that are planned to be accommodated, but only if those policies are required to be included in the official plan to conform with a provincial plan or be consistent with a policy statement issued under subsection 3 (1); or
- any other area prescribed for the purposes of this clause.

Under Bill 185, new subsections 16 (22) to (24) were added to the Planning Act that related to Official Plans and limit the ability of Official Plans to contain policies requiring an owner to provide or maintain parking facilities within PMTSA's, certain other areas surrounding and including an existing or planned higher order station or stop and other prescribed areas. Related amendments are also made to Section 34. The Town has confirmed that the subject lands, within the Georgetown GO MTSA are defined as such an area and therefore no parking minimums shall apply.

Additionally, the Georgetown GO Station Area/Mill Street Corridor Secondary Plan Review Background and Policy Options Report prepared for the Town, identified that the Georgetown GO MTSA is anticipated to be assigned density targets through the Municipal Comprehensive Review and is therefore expected to become a PMTSA in the future.

14. Travel Demand Management

14.1 Travel Demand Management

Travel Demand Management (TDM) refers to a variety of strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system. TDM strategies have multiple benefits including the following:

- Reduced auto-related emissions to improve air quality;
- Decreased traffic congestion to reduce travel time;
- Increased travel options for businesses and commuters;
- Reduced personal transportation costs and energy consumptions; and
- Support Provincial smart growth objectives.

The combined benefits listed above will assist in creating a more active and livable community through improvements to overall active transportation standards for the local businesses and surrounding community.

14.2 Existing TDM Opportunities

14.2.1 Walking

Within the study area, sidewalks are provided on at least one side of the road with the exception of Daniela Court.

14.2.2 Transit

The subject site is located 400 metres from the Georgetown GO Station, a major transit hub which allows access to many prime locations throughout Ontario. The Georgetown GO Station is serviced by both busses and trains.

The major transit hub is identified in **Figure 19** below.

Figure 19 Georgetown Go Station

14.3 Recommended TDM Measures

The table below summarizes the recommended TDM strategies for the subject site.

Table 12 Recommended TDM Strategies

TDM Measure	Responsibility	Cost	Note
Hard Measures			
Pedestrian connections	Applicant	Integrated into the overall development cost	Site plan includes a walkway system providing a connection to new proposed municipal sidewalks

Bicycle Parking	Applicant	Integrated into the overall development cost	Bicycle parking will be provided at a rate of 0.70 spaces per unit for residents. Short-term bicycle parking will also be provided within well-lit and visible areas. One bicycle repair station is proposed to be located within each long-term bicycle room.
Public Transit Access	Applicant	Integrated into the overall development cost	The subject site is located within walking distance of the Georgetown GO Station.
Reduced Parking Supply	Applicant	Integrated into the overall development cost	Reduced parking supply encourages residents to reconsider ownership of a vehicle
Soft Measures			
Information packages (GO schedules, cycling maps)	Applicant	To be determined.	Distributed at the sales office with Purchase and Sales Agreement
Unbundled vehicle parking sales	Applicant	Integrated into the overall development cost	Proposed to unbundle the sales of the parking space and unit to provide residents with the true cost of the parking space
Transit incentives (i.e. PRESTO cards)	Applicant	Integrated into the overall development cost	A one-time transit pass to be provided with the purchase of each unit to encourage residents to try transit.
Additional incentives	Applicant	To be determined.	To explore additional incentives to those who do not purchase a parking space.

Transit Information	Applicant	To be determined	Developer to consider providing screens in the main lobby that will display real-time data for the local bus routes and GO Transit, in addition to wayfinding signage
Car share parking	Applicant	Integrated into the overall development cost	Applicant to explore the opportunity to provide car share spaces as a replacement for vehicle ownership for residents

15. Vehicle Swept Path Analysis

GHD conducted a vehicle swept path analysis to evaluate site circulation for an emergency vehicle using the fire route, a waste collection truck navigating the site, and passenger vehicle movement within the parking lot. The results of this analysis, provided in **Appendix G**, demonstrate that the site can accommodate these design vehicles without any issues.

16. Conclusions

The proposed site plan consists of seven high-rise buildings with a total of 1,481 dwelling units and 525 m^2 of ground floor commercial.

Access to the subject site is proposed via a right-in-right-out access along Mountainview Road North and a full-moves access along River Drive.

Based on ITE Trip Generation rates, the subject site is expected to generate a total of 364 two-way trips during the a.m. peak hour consisting of 88 inbound and 276 outbound trips. During the p.m. peak hour, it is expected to generate 444 new two-way vehicles trips consisting of 268 inbound and 176 outbound trips.

Based on the Rosetta Transportation Study by Paradigm, changes in lane arrangement in intersection River Drive and Mountainview Road North was recommended. The southbound approach will be reduced to one shared through/right lane and one left-turn lane with 50 metres of storage and the northbound approach will have a separate left-turn lane with 50 metres of storage.

Under existing traffic conditions, all intersections are operating at acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours.

Under the 2042 future background traffic conditions, following the lane arrangement changes on Mountainview Road North and River Drive, the intersection continues to operate with acceptable v/c ratios, delays, and queuing. As a result, no improvements are recommended for the intersection during both peak hours.

The intersection of John Street and Mountainview Road North contains a critical movement for the southbound through-right (SBTR) movement during both peak hours. During the a.m. peak hour, SBTR has a v/c ratio of 1.00 and a LOS of F and during the p.m. peak hour, SBTR has a v/c ratio of 0.68 and a LOS of C.

All other movements continue to operate with acceptable v/c ratios, delays, and queuing.

With the addition of site traffic, Mountainview Road North and Rive Drive continues to operate with acceptable v/c ratios, delays and queuing during both peak hours. The intersection of John Street and Mountainview Road north still contains the critical movement at SBTR during both peak hours. Traffic signal warrant was completed for this intersection which showed that the signalized light is unnecessary, and it should continue to operate as an all-way stop sign.

Based on the Town's Zoning By-law, a total of 2,222 residents, 370 visitor and 27 commercial parking spaces are required for the subject site.

A reduction in the parking supply is proposed and is supported through several Provincial, Regional and Town policies including Bill 185, Cutting Red Tape to Build More Homes Act, 2024, which received Royal Assent in June 2024.

Under Bill 185, new subsections 16 (22) to (24) were added to the Planning Act that related to Official Plans and limit the ability of Official Plans to contain policies requiring an owner to provide or maintain parking facilities within PMTSA's, certain other areas surrounding and including an existing or planned higher order station or stop and other prescribed areas. The Town has confirmed that the subject lands, within the Georgetown GO MTSA, are defined as such an area and therefore no parking minimums shall apply.

Additionally, the Georgetown GO Station Area/Mill Street Corridor Secondary Plan Review Background and Policy Options Report prepared for the Town, identified that the Georgetown GO MTSA is anticipated to be assigned density targets through the Municipal Comprehensive Review and is therefore expected to become a PMTSA in the future.

The subject site proposes resident parking at a rate of 0.90 spaces per unit and visitor parking at a rate of 0.10 spaces per unit. It is also proposed that the commercial parking requirement will be shared with the resident visitor parking supply. The proposed parking supply is expected to meet the demands of the subject site.

Additionally, TDM measures are proposed for the subject site to encourage residents to explore various modes of transportation in order to reduce their dependency on single occupancy vehicle trips. These measures include a reduction in the parking supply, pedestrian connections to the municipal rights-of-way and transit information packages.

The Town's Zoning By-law only requires bicycle parking be provided for the commercial GFA with a minimum of 3 spaces required. The proposed bicycle parking supply is a rate of 0.70 spaces per unit for long term resident bicycle parking (1,037 spaces) and 0.02 spaces per unit for short term visitor parking (total of 34 spaces) which exceeds the Zoning By-law requirements and supports the reduced resident parking supply.

The Town's Zoning By-law only requires one loading space for the commercial GFA. The proposed Site Plan provides a total of 6 loading spaces exceeding the Zoning By-law requirements.

The proposed development's parking provision of 0.90 spaces per unit for residents is supported by Transportation Tomorrow Survey (TTS) data, which shows that approximately 18 percent of apartment households in Georgetown do not own a vehicle. This trend reflects a growing shift towards reduced vehicle ownership, particularly in areas like Georgetown where convenient transit options, such as the nearby Georgetown GO Station, offer alternatives to driving.

The proposed visitor parking rate of 0.10 spaces per unit is appropriate for this development given the total number of residential units. With a large number of units, the total visitor parking supply scales to a sufficient amount to accommodate expected demand while preventing an oversupply of spaces that would consume valuable land.

The proposed sharing of the commercial visitor and residential visitor spaces is consistent with the idea that the ground floor commercial uses proposed as part of a mixed-use sites in dense urban environments will in time be primarily considered ancillary to the local areas as population increases.

The proposed location of the Street A intersections with River Drive and Mountainview Road North satisfy the TAC intersection spacing recommendations.

The proposed site access located along Street A have been designed to meet OPSD 350 standards with a minimum of 7.2 metre pavement width and 4.5 metre curb radii.

A Vehicle Swept Path Analysis was undertaken to assess the site's ability to accommodate the required turning movements of a waste collection truck, MSU Truck, emergency vehicle and passenger vehicles as per TAC design guidelines and confirmed that the site loading areas and underground parking garage can sufficiently accommodate the aforementioned design vehicles.

The traffic study demonstrates that the proposed residential development can be effectively supported by the current and planned road network, with no significant impact on traffic flow or road capacity.