URBANTRANS
Engineering Solutions Inc.

Traffic Impact Brief, Parking Study & On-site Circulation Review

Proposed Residential Development

236 Plains Road East
City of Burlington, ON

UT-23-041

November 14, 2023

November 14, 2023

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RE: Traffic Impact Brief, Parking Study & On-site Circulation Review
Proposed Residential Development
236 Plains Road East, City of Burlington
Reference No.: PP-23-041

UrbanTrans Engineering Solutions Inc. was retained by Coral Gable Homes Ltd. (the "Client") to complete this Traffic Impact Brief, Parking Study & On-site Circulation Review for a residential development in support of a Zoning By-law Amendment application. The proposed development is located south of Plains Road East and west of Shadeland Avenue municipally known as 236 Plains Road East, in the City of Burlington.

The subject lands currently provide a single detached residential dwelling unit. Based on the site plan provided by Weston Consulting dated November 1, 2023 (see **Appendix A**), it is our understanding the development proposal involves demolishing the existing residential unit and proposes a 3-storey townhouse block containing seven (7) units fronting a private condominium road. At a minimum, two (2) car parking spaces will be provided for each unit in a garage and lead in driveway portion. A full movement vehicular entrance is proposed via Plains Road East.

This report concludes the proposed residential development will have negligible traffic operations and/or safety impacts to the immediate roadways and nearby intersections. Furthermore, the transportation study concludes that the proposed development's zero visitor parking provision can adequately be accommodated by the existing transportation network, excellent Burlington's Transit system as well as the recommended TDM measures and incentives recommended in this report.

It is understood that the City of Burlington is the Municipal authority to review and approve the Traffic Impact Brief, Parking Study & On-site Circulation for the proposed development. The Study is in accordance with the City of Burlington Traffic Impact Brief, Parking Study & On-site Circulation Guidelines. We thank you for the opportunity to undertake this study. We trust the enclosed comply with your requirements. Should you have any questions, please do not hesitate to contact the undersigned.

Kind Regards,
UrbanTrans Engineering Solutions Inc.



Signature



Engineer's Seal

Annosan Srikantha, P.Eng.
President

DISCLAIMER

This document entitled '236 Plains Road East – Traffic Impact Brief, Parking Study & On-site Circulation Review' or named part thereof (the "project") was prepared by UrbanTrans Engineering Solutions Inc. ("UrbanTrans") for the account of Coral Gable Homes Ltd. (the "Client"). This document is confidential and prepared solely for approval and commenting municipalities and their agencies in their review and approval of this project. The materials in this report reflect best judgement based on the information available at the time the document was issued. Any reliance on this document by any third party is strictly prohibited and UrbanTrans accepts no responsibility for damages, if any, suffered by any third party by reason of decisions made or actions based on this document.

RECORD OF REVISIONS

Revision	Date	Identification	Description
0	November 14, 2023	Final Report	Final Submission

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1.0 INTRODUCTION

1.1 Background

UrbanTrans Engineering Solutions Inc. was retained by Coral Gable Homes Ltd. (the "Client") to complete this Traffic Impact Brief, Parking Study & On-site Circulation Review for a residential development in support of a Zoning By-law Amendment application.

1.2 Objective

The study will assess the following components:

- Evaluate potential impacts of traffic changes prompted by the proposed development on municipal roadways and identify any infrastructure enhancements or mitigation measures warranted to ensure the road network will operate acceptably and safely upon completion of the proposed development.
- Determine whether the proposed vehicle supply can sufficiently accommodate the peak parking demands of the proposed development and conform to the City's Zoning By-law requirements.
- Simulate vehicle swept path analysis to determine adequate space requirements are provided for passenger cars.

1.3 Development Proposal

The proposed development is located south of Plains Road East and west of Shadeland Avenue municipally known as 236 Plains Road East, in the City of Burlington.

The subject lands currently provide a single detached residential dwelling unit. Based on the site plan provided by Weston Consulting dated November 1, 2023 (see **Appendix A**), it is our understanding the development proposal involves demolishing the existing residential unit and proposes a 3-storey townhouse block containing seven (7) units fronting a private condominium road. At a minimum, two (2) car parking spaces will be provided for each unit in the garage and lead in driveway portion. A full movement vehicular entrance is proposed via Plains Road East.

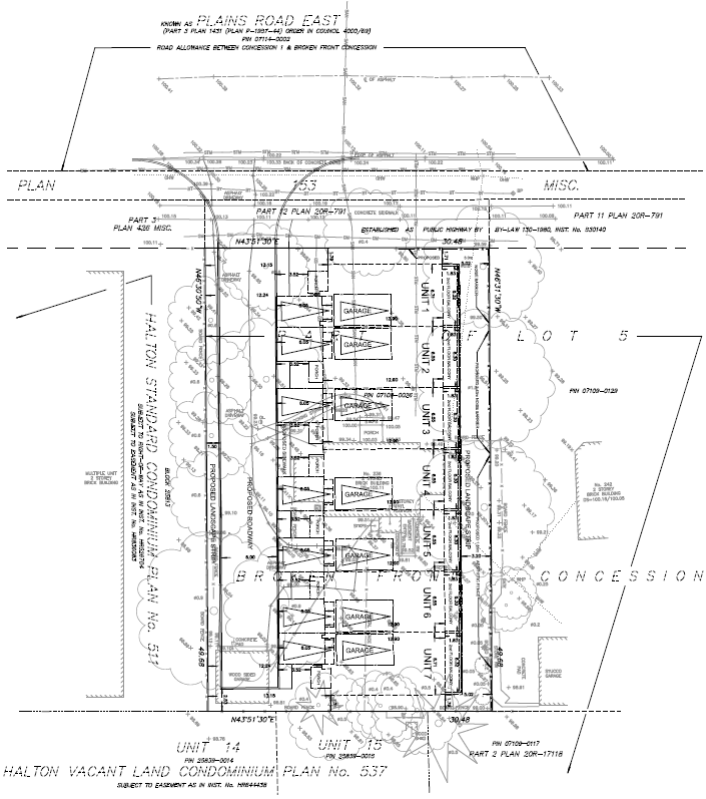
The location of the proposed development is illustrated in **Figure 1**. The proposed site plan is illustrated in **Figure 2; Appendix A** also provides a larger scale version of the proposed site plan.

Figure 1 - Site Location



Source: Google Map

Figure 2 – Proposed Site Plan



Source: Weston Consulting Site Plan

2.0 EXISTING CONDITIONS

This section documents the transportation network in the study area in 2023, including existing roadways, transit services, active transportation network, traffic control measures, and intersection performances.

2.1 Road Network

To provide clarity throughout this report, Shadeland Avenue has been given a north-south orientation. Subsequently, Plains Road East has been given an east-west orientation. On this basis, the characteristics of the roads and intersections within the vicinity of the subject site are described below:

- **Shadeland Avenue** operates as a minor arterial road and is under the jurisdiction of the City of Burlington. It operates as a 2-lane cross-section with a two-way left turn lane at the intersection adjacent to the site and maintains a posted speed limit of 40 km/hr.
- **Plains Road East** operates as a major arterial road and is under the jurisdiction of the City of Burlington. It operates as a 4-lane cross-section with a two-way left turn lane at the intersection adjacent to the site and maintains a posted speed limit of 60 km/hr.

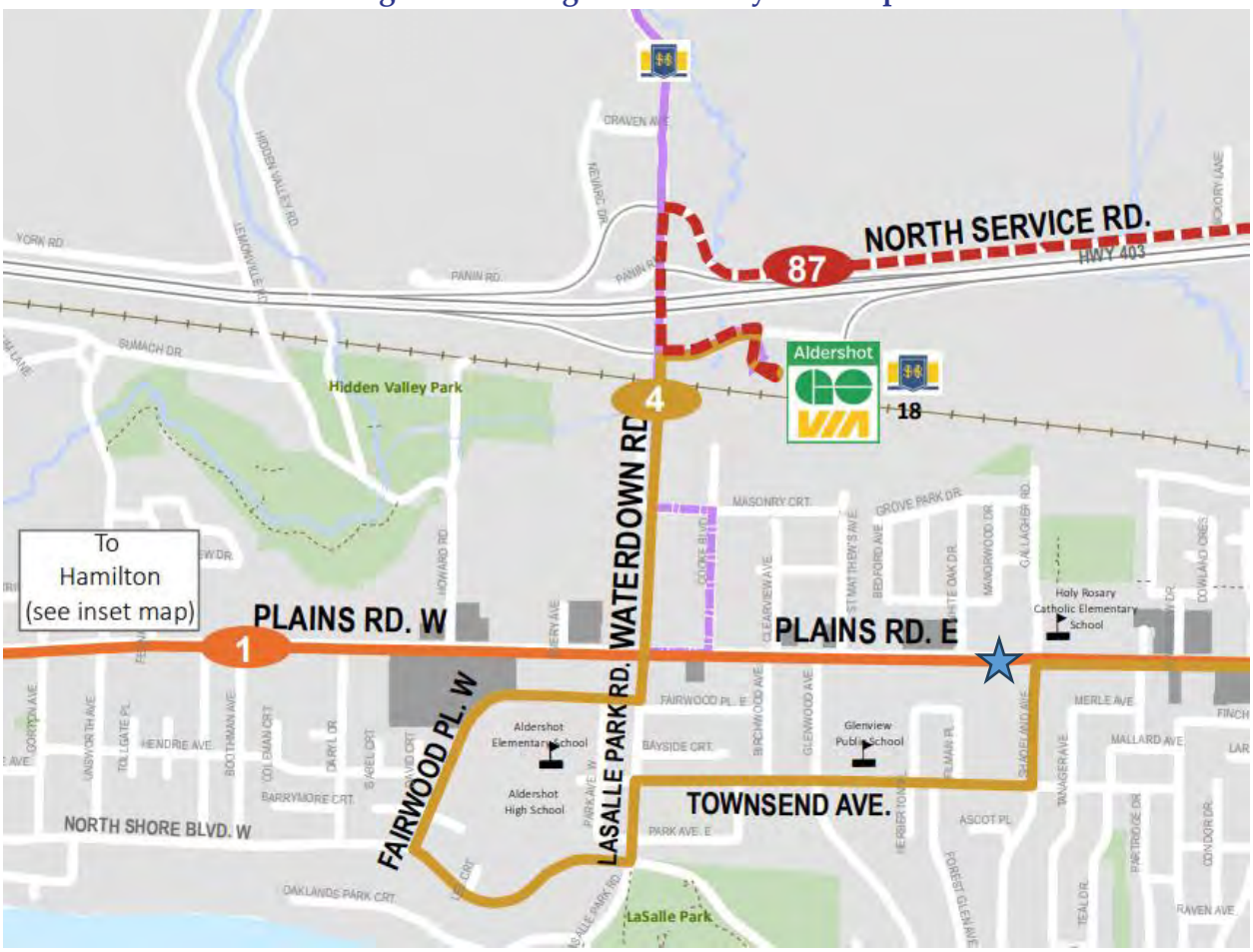
2.2 Transit Network

The proposed subject site is situated within an area that is currently well serviced by the existing Burlington Transit network. Nearby bus access allows for easy connectivity to multiple bus terminals and subsequently the greater portion of the Burlington Transit network. The transit routes are provided in **Appendix B** and the route services in the vicinity of the subject site are summarized in **Table 1**. The existing Burlington Transit System Map in the vicinity of the subject site is illustrated in **Figure 3**. The nearby transit also offers a simple and timely connecting routes to other transit networks such as GO Transit, VIA Rail Canada and the Hamilton Street Railway, all through the nearby Aldershot GO station.

Table 1: Area Transit Context

Bus Route	Route Description	Frequency
1-Plains/Fairview	Operates in a mostly east-west direction along Plains Road West and Fairview Street between Hamilton and Appleby GO Station.	12 minutes
4-Central	Operates in a non-linear mostly east-west direction along Plains Road West, Lakeshore Road and multiple local roads between Aldershot Station and Appleby GO Station.	30 minutes
Aldershot Station	Weekday operating hours are from 6:00am to 8:54pm and from 6:30am on weekends. Station offers free connectivity to Hamilton Street Railway and Oakville Transit. Discounted fares to GO transit and connectivity to ViaRail.	Varies

Figure 3: Burlington Transit System Map



Source: Burlington Transit

2.3 Active Transportation Network

Active transportation network involves human-powered forms of travel with walking and cycling being the most dominant and can be combined with other modes such as public transit.

2.3.1 Sidewalk Network

Currently, there are sidewalks located on both sides Plains Road West. Subsequently, there is a sidewalk on one side of Shadeland Avenue. The proposed development provides direct sidewalk connections to the surrounding road network. Pedestrian activity towards nearby transit network and local services is highly accommodated.

2.3.2 Bicycle Network

There is a designated painted bike lane beginning at the intersection of Plains Road West and Shadeland Avenue. The bike lane continues east along Plains Road West for 5 km and intersects with multiple other designated bike lanes at King Drive, Maple Avenue and Brant Street before merging into shared bike lane. This bike lane is well connected to a network of other designated bike lanes and multi-use trails. There is a continuous connectivity of designated bike lanes

between the subject site and downtown core area. A segment of the map layout of the cycling network in the region containing the subject site is illustrated in **Figure 4**.

Figure 4 – Existing Cycling Network in the Study Area



Source: Burlington Cycling Network

3.0 SITE GENERATED TRAFFIC VOLUMES

3.1 Proposed Development

As previously mentioned, the development proposal involves demolishing the existing residential unit and proposes a 3-storey townhouse block containing seven (7) units fronting a private condominium road. At a minimum, two (2) car parking spaces will be provided for each unit in the garage and lead in driveway portion. A full movement vehicular entrance is proposed via Plains Road East.

3.2 Trip Generation

The number of vehicular trips generated by the proposed development is estimated using the information contained in the ITE Trip Generation Manual (11th Edition) published by the Institute of Transportation Engineers (ITE). For the purpose of this assessment, the maximum between equations and average rates of the ITE Land Use Code (LUC 220) "Multifamily Housing (Low-Rise)" has been utilized for the proposed development provided in **Appendix C**.

Table 2 summarizes the trip generation volumes for the proposed development during the weekday AM and PM peak hour for full build-out. For the purpose of this assessment, no modal split reduction has been assumed for the proposed development for conservative analysis.

Table 2: Site Traffic Trip Generation

Land Use (Magnitude)		Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise) 14 Units	New Trip	1	2	3	3	1	4

Based on the trip generation calculations, the proposed development is estimated to generate a total 3 two-way trips (1 inbound and 2 outbound) during the weekday morning peak hour and 4 two-way trips (3 inbound and 1 outbound) during the afternoon peak hour.

On this basis, it is UrbanTrans opinion the site traffic trip generation is negligible and does not warrant a traffic analysis under existing and future total traffic conditions when the proposed development is fully built as there will be negligible traffic impacts to the abutting road network.

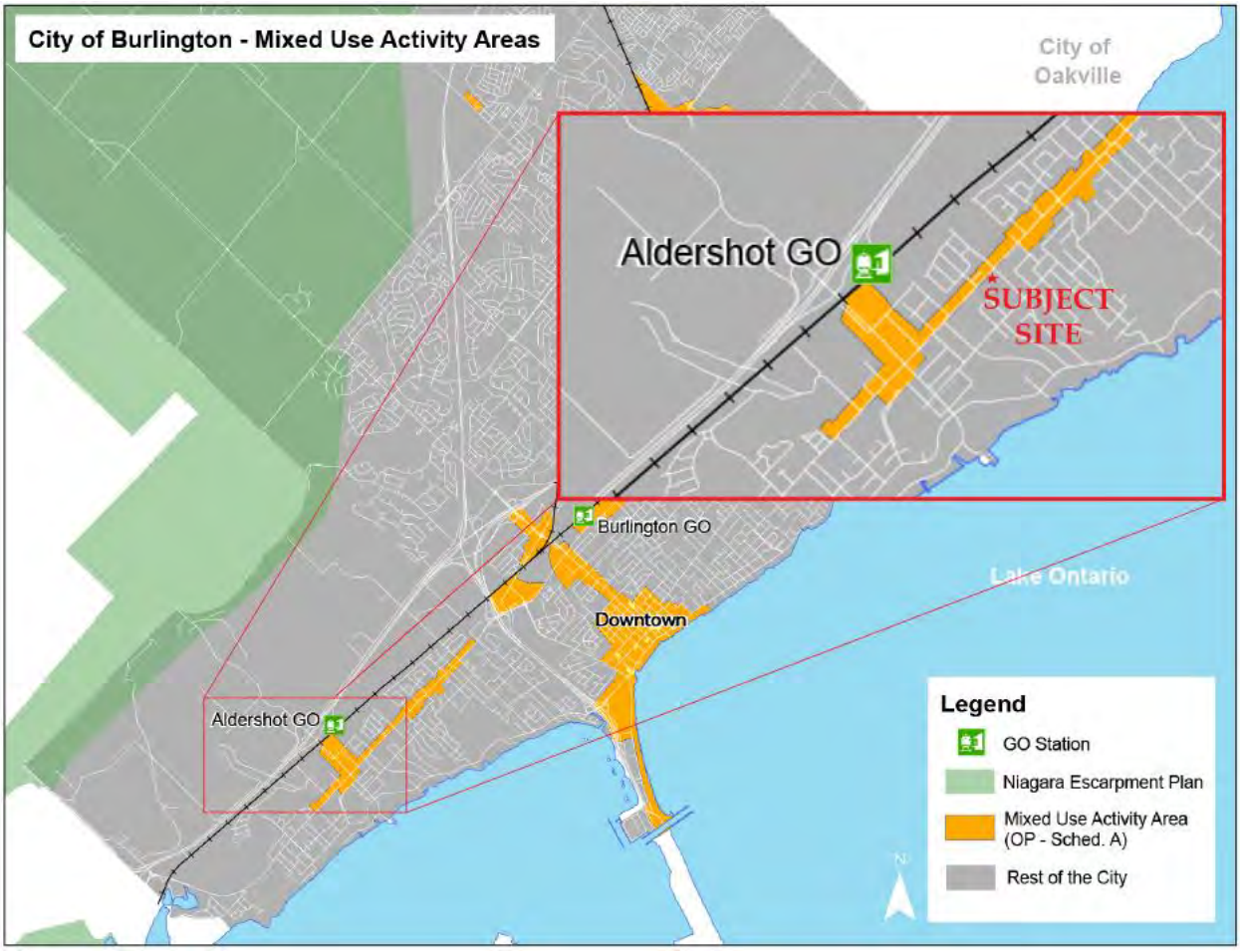
4.0 PARKING REQUIREMENT

4.1 Burlington's Citywide Parking Standards Review (IBI Group Final Report, July 21, 2017)

The City of Burlington hired IBI Group in 2016 to conduct a professional assessment of parking rates and standards in Burlington. IBI Group's final report was presented to Council members at the Committee of the Whole meeting on September 25, 2017. City Council directed staff to obtain input from the public and report back with recommended parking rates. A staff report was considered by Burlington City Council at the June 10, 2019 meeting of Committee of the Whole. City Council directed staff to report back in Q3 2019 with Zoning By-law amendments to implement the recommended parking rates. The Planning and Development Committee of Council approved the revised parking rates at a statutory public meeting on September 17, 2019 and these rates were approved by Council on September 23, 2019.

As previously mentioned, the proposed development is located south of Plains Road East and west of Shadeland Avenue municipally known as 236 Plains Road East, in the City of Burlington. Based on the IBI Group Final Report *Exhibit 4.1: Mixed Use Activity Areas*, the proposed development located in 'Other Areas' of the City however, the Mixed Use Activity Area referred to as 'Intensification Areas' is located immediately north of Plains Road East from the proposed development and is illustrated in **Figure 5**.

Figure 5 – Mixed Use Activity Areas (Exhibit 4.1 IBI Group Final Report)



The Mixed Use Activity Areas are a special policy area, identified in Schedule A of the Official Plan. These areas will undergo redevelopment which will profile a mixture of land uses, intensification, and a transit and pedestrian oriented urban form.

For the purpose of this assessment, UrbanTrans will compare the parking rates for both 'Other Areas' and 'Intensification Areas'. **Table 3** summarizes the recommended minimum parking rates for the proposed development based on Burlington City-wide Parking Standards Review (IBI Group Final Report) other areas vs intensification areas. It is important to note, street townhouse is defined as a building containing not less than 2 and not more than 8 dwelling units and is separated from each adjoining unit by a common or party wall above grade.

Table 3: Burlington's Citywide Parking Standards Review Vehicle Parking Requirement ('Other Areas' vs 'Intensification Areas')

Type of Use	No. of Units	Parking Rates	Parking Requirement	Parking Provided	Difference
Street Townhouse	7	1.0 spaces/unit (Intensification Areas)	7	14	+7
		2.0 spaces/unit (Other Areas)	14	14	-

Based on the Burlington City-wide Parking Standards Review (IBI Group Final Report), the proposed residential development is required to provide a maximum of 14 tenant parking spaces based on 'Other Areas' and 'Intensification Aeras' parking rates. The subject site provides at a minimum, two (2) car parking spaces for each unit in the garage and lead in driveway portion resulting in 14 parking spaces, thereby meeting the Zoning By-Law requirement. It is important to note that the recommended parking rates based on the Burlington City-wide Parking Standards Review (IBI Group Final Report) considers driveways and garage spaces to be included in the required supply. Furthermore, no visitor parking spaces are required.

It is UrbanTrans opinion by providing no visitor parking spaces will support the City of Burlington's Official Plan and directions to encourage walking, cycling, and transit over other passenger transportation modes and to reduce dependence on private automobiles resulting in slowing down the impacts of climate change and support the development of more affordable housing.

4.2 ITE Parking Generation Manual (5th Edition)

The number of vehicular parking spaces generated by the proposed development is also estimated using the information contained in the ITE Parking Generation Manual (5th Edition) published by the Institute of Transportation Engineers (ITE). For the purpose of this assessment, the ITE Land Use Codes (LUC) 220 "Multifamily Housing (Low-Rise)", which includes townhouses, fitted curve equations and average rates have been utilized for the proposed development, and is provided in **Appendix D**.

As previously mentioned, based on the IBI Group Final Report *Exhibit 4.1: Mixed Use Activity Areas*, the proposed development located in 'Other Areas' of the City however, the Mixed Use Activity Area referred to as 'Intensification Areas' is located immediately north of Plains Road East from the proposed development. On this basis, the proposed development falls within a Dense Multi-Use Urban setting. As stated in the ITE Parking Generation manual:

- *"a fully developed area (or nearly so), with diverse and interacting complementary land uses, good pedestrian connectivity, and convenient and frequent transit. This area type can be well-developed urban area outside a major metropolitan downtown or a moderate size urban area downtown…"*

Table 4 summarizes the average parking generation for the proposed development during the weekday in a Dense Multi-Use Urban (no nearby rail transit).

Table 4: Site Parking Generation – Dense Multi-Use Urban (no nearby rail transit)

Land Use	No. of Units	Parking Rates	Average Parking Requirement	Parking Provided	Difference
Multifamily Housing (Low-Rise)	7	Average: 0.76 space/unit	5	14	+9

Based on the ITE Parking Generation rates outlined in Table 7, the average vehicle requirement for the subject site is 0.76 vehicles per unit. On this basis, the proposed seven (7) residential units will generate a parking demand of five (5) parking spaces, thus the proposed parking supply of 14 spaces can sufficiently meet the parking demand.

It is important to note, based on the ITE Parking Generation Manual (5th Edition), the average parking rate for Dense Multi-Use Urban (< ½ mile to rail transit) is 0.58 space/unit. Although the proposed development is located 2.0 km or 1.24 miles from the Aldershot rail transit station, residential tenants can commute from the proposed development to the station via transit and walking in 15 minutes and 28 minutes, respectively.

5.0 TRANSPORATION DEMAND MANAGEMENT (TDM)

Transportation Demand Management (TDM) Plan discusses measures to reduce congestion, minimize the number of single-occupant vehicles and encourage non-auto modes of travel such as walking, cycling and transit as well as ridesharing. TDM plans consist of specialized policies, targeted plans, innovative mobility services and products that encourage people to use sustainable modes of transportation, rather than driving alone, or make fewer trips by car.

TDM strategies have multiple benefits including reduce auto-related emissions to improve air quality, decreased traffic congestion to reduce travel time, increased travel options, reduce personal transportation costs and energy consumption and support Provincial smart growth objectives.

The primary objective of this TDM plan are as follows:

- Provision of facilities/operations to promote behavioural change for reduced automobile uses and encourage the use of alternative sustainable transportation modes aside from single-occupancy vehicle (SOV).
- Maximize average auto occupancies, with the intent of a net minimization of site-related auto trips.
- Create and support opportunities for an inclusive transportation system to accommodate and facilitate all potential road uses in a safe and efficient manner.

5.1 Halton Region Smart Commute

The Smart Commute Halton program was launched in June 2006. Since its initiation, the Smart Commute Halton program has seen success in bringing awareness to the Smart Commute Initiative as well as encouraging the use of alternative modes and increasing the carpool modal share. Smart Commute Halton initiatives include:

- Carpool / Ridematching Service;
- Preferential Carpool Parking;
- Emergency Ride Home Program; and
- Other supportive measures.

The program has been expanded to include the Local Municipalities and employers across the Region with varying initiatives.

Many employers and their employees understand and value sustainability and the importance of curbing SOV travel. The sharing of experiences with TDM initiatives and knowledge gained is extremely important in gaining understanding and support for the applications of TDM.

Smart Commute offers one-on-one support for staff to use sustainable modes and provides promotions and incentives on an on-going basis. A web-based car matching tool is provided to allow carpoolers to easily identify ride matching options among a large membership base and form carpooling arrangements.

5.2 TDM Design Guidelines

Certain spatial elements of TDM programs can be implemented through site and community design guidelines. Site and community design guidelines are implemented by the Local Municipalities in Halton Region. They are presented here for informational purposes. **Table 5** outlines suggested community and site design guidelines. The combination of the community and site design elements of TDM with the policy elements and effective marketing and delivery should achieve the most desirable TDM results. The implementation of a majority of these design policies falls within the responsibility of the Local Municipalities.

Table 5: TDM Supportive Design Policies

Community Design	
Streetscaping	Design streets to be linear parks, with pedestrian amenities, landscaping, and bike lanes
Complete Streets	Design streets where equal consideration is given to the automobile, public transit, cycling, and walking
Transit oriented development	Locate within 400 metres from major transit route (to be determined by local and regional planning studies)
Connectivity	Plan communities in a modified grid formation while discouraging cul-de-sacs
Subdivision design	Design shorter blocks and narrower streets

Table 5: TDM Supportive Design Policies (Cont'd)

Site Design	
Building location	Bring buildings closer to the street
Parking	Provide no more than one parking space for every two workers Provide a minimum of one carpool space for every 100 workers
Cycling Amenities	Provide showers, and lockers in large commercial and employment developments

5.3 City of Burlington TDM Commitments

The City of Burlington will consider reduced parking requirements for development where a comprehensive Transportation Demand Management (TDM) Plan is submitted and implemented to the satisfaction of the city.

- The City will evaluate reduced parking standards through a city-wide parking study.
- The City will encourage community-wide and area-specific transportation demand management programs, such as car share and bike share, to locate services in the city.
- A coordinated approach will be encouraged in the development, implementation and monitoring of transportation demand management (TDM) measures.
- The City will work with development proponents to provide all new building occupants with information on available pedestrian, cycling and transit facilities and carpooling options within the community, including local transit routes and schedules.

On this basis, it is recommended the Owner shall coordinate with City of Burlington to deliver and promote the Transit Incentive information packages and programs which includes information packages of Burlington Transit maps and GO station schedules.

6.0 TRANSPORTATION PLANNING CONTEXT IN THE AREA

6.1 City of Burlington Official Plan (February 2021)

The Plan's goal is to create a long-term vision of the town and the quality of life for Burlington citizens through objectives and policies. The Plan gives the public and commercial sectors guidance on policy regarding issues of resource management, land use, and development to help shape the future planning and growth of the City of Burlington in the direction of the desired shared vision.

The Official Plan's transit objectives are the following: "

- *To promote the use of transit and reduce reliance on the private automobile by making transit an attractive and convenient transportation option by encouraging transit-supportive land use.*
- *To develop the transit system as a part of a multi-modal network that supports the city's Urban Area, with a focus on the city's Primary, Secondary and Employment Growth Areas.*
- *To implement frequent transit corridors as a priority component of the citywide transit network, to support community connectivity, facilitate intensification and increase ridership in the city's growth areas.*

- *To implement other local transit service, such as support corridors, with varying levels of service and geographic coverage across the city to support the needs of city residents, employees, employers and customers.*
- *To co-ordinate transit service with other service in the Greater Toronto and Hamilton Area (GTHA) to achieve convenient and effective transit service integration with GO transit, VIA rail, Hamilton Street Rail (HSR), Oakville Transit and other neighbouring service providers.*
- *To ensure that new development provides adequate on site connections to transit, such as pedestrian pathways that connect to the public right-of-way. "*

Based on our review of the Official Plan Transportation Policies and directions, the City indicates that there is a desire to steer development towards a transit-oriented transportation network. This will have the effect of reducing single-occupant-vehicle trips and to support other modes of transportation such as public transit and active transportation.

7.0 On-site Circulation Review

AutoTURN software was used to generate vehicular turning templates to confirm and demonstrate the accessibility for typical 5.6m long passenger vehicle (P TAC-2017). **Figure 6** illustrates the turning movement templates for passenger vehicles and the analysis demonstrates that a passenger vehicle can maneuver within the designated route with no conflicts. It is important to note waste collection will occur as curb side pick-up with bins rolled out via Plains Road East.

8.0 CONCLUSION

The subject lands currently provide a single detached residential dwelling unit. Based on the site plan provided by Weston Consulting dated November 1, 2023, it is our understanding the development proposal involves demolishing the existing residential unit and propose a 3-storey townhouse block containing seven (7) units fronting a private condominium road. At a minimum, two (2) car parking spaces will be provided for each unit in the garage and lead in driveway portion. A full movement vehicular entrance is proposed via Plains Road East.

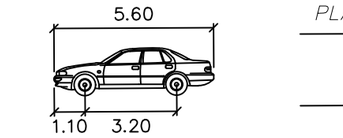
Based on the ITE Trip Generation Manual (11th Edition) calculations, the proposed development is estimated to generate a total 3 two-way trips (1 inbound and 2 outbound) during the weekday morning peak hour and 4 two-way trips (3 inbound and 1 outbound) during the afternoon peak hour. On this basis, it is UrbanTrans opinion the site traffic trip generation is negligible and does not warrant a traffic analysis under existing and future total traffic conditions when the proposed development is fully built as there will be negligible traffic impacts to the abutting road network.

Based on our experience, excessive parking supply imposes environmental costs, contradicts community development objects for more livable and walkable communities, and tends to increase driving and discourage the use of alternative modes of travel. It is anticipated that the combination of reduced parking supply and an efficient public transit system will encourage the use of alternative modes of travel.

It is UrbanTrans Engineering' opinion that parking management is the best TDM measure to encourage residents to walk and cycle to and from the proposed development. The City continues to evolve into an increasingly urban environment with more pervasive and frequent public transportation and has recognized the need to review its parking standards. High minimum parking requirements contribute to an oversupply of parking, inefficient use of land, and dispersed development patterns, which in turn strengthen automobile dependence and discourages alternative forms of transportation such as transit and walking.

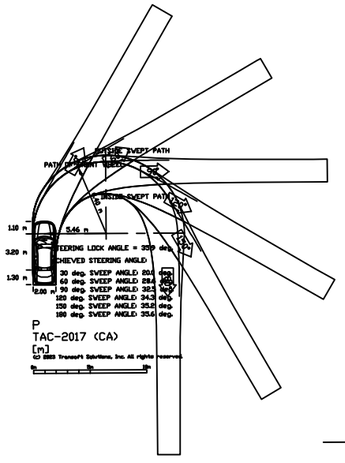
It is UrbanTrans' opinion the proposed parking provision of two (2) car parking spaces provided for each unit in the garage and lead in driveway portion at 236 Plains Road East to accommodate the proposed townhouse development is reasonable and justified based on the justifications provided in this study and meets the Burlington City-wide Parking Standards (IBI Group Final Report, July 2017).

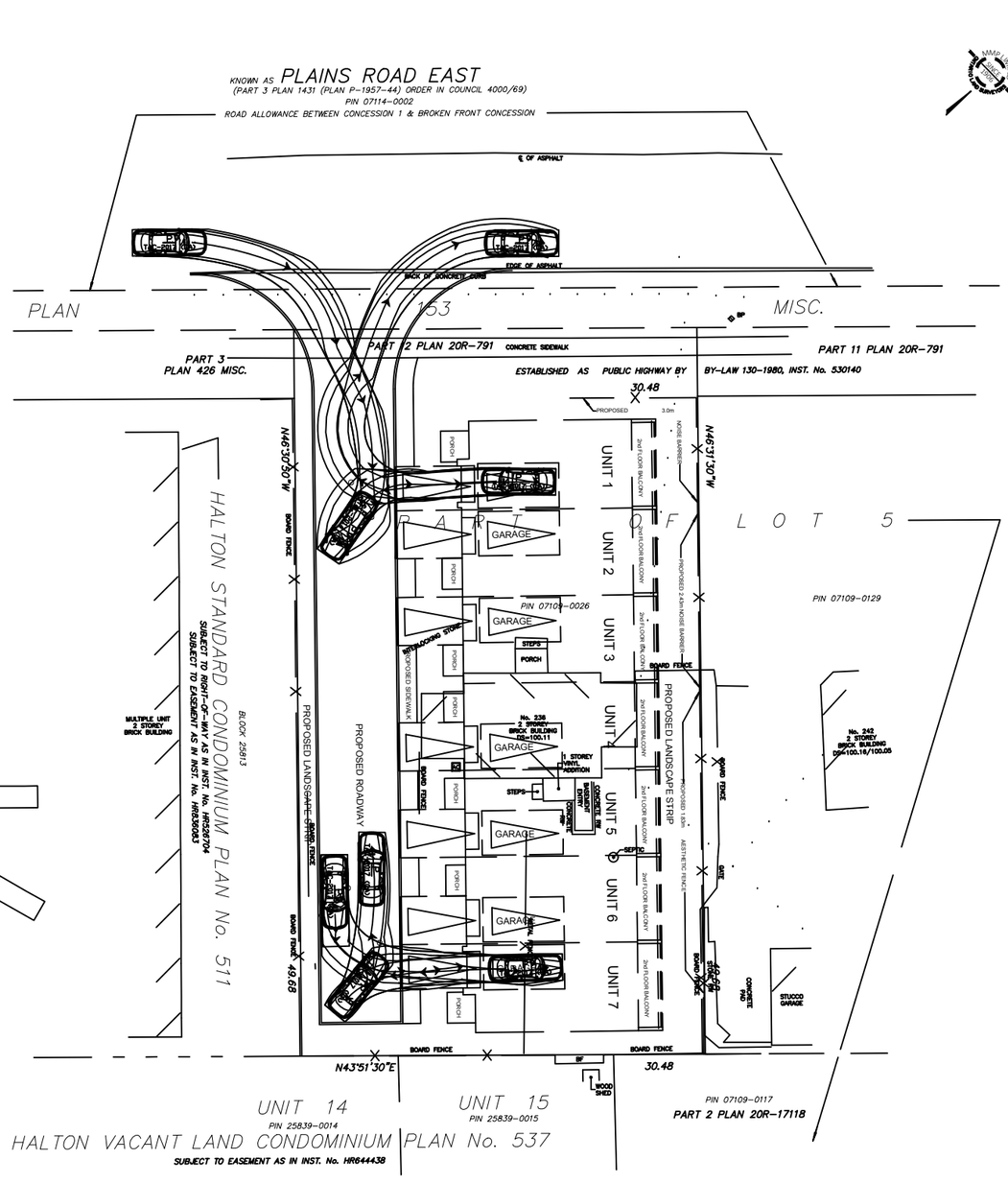
The analysis demonstrates that a passenger vehicles can maneuver within the designated route with no conflicts. It is important to note waste collection will occur as curb side pick-up with bins rolled out via Plains Road East.



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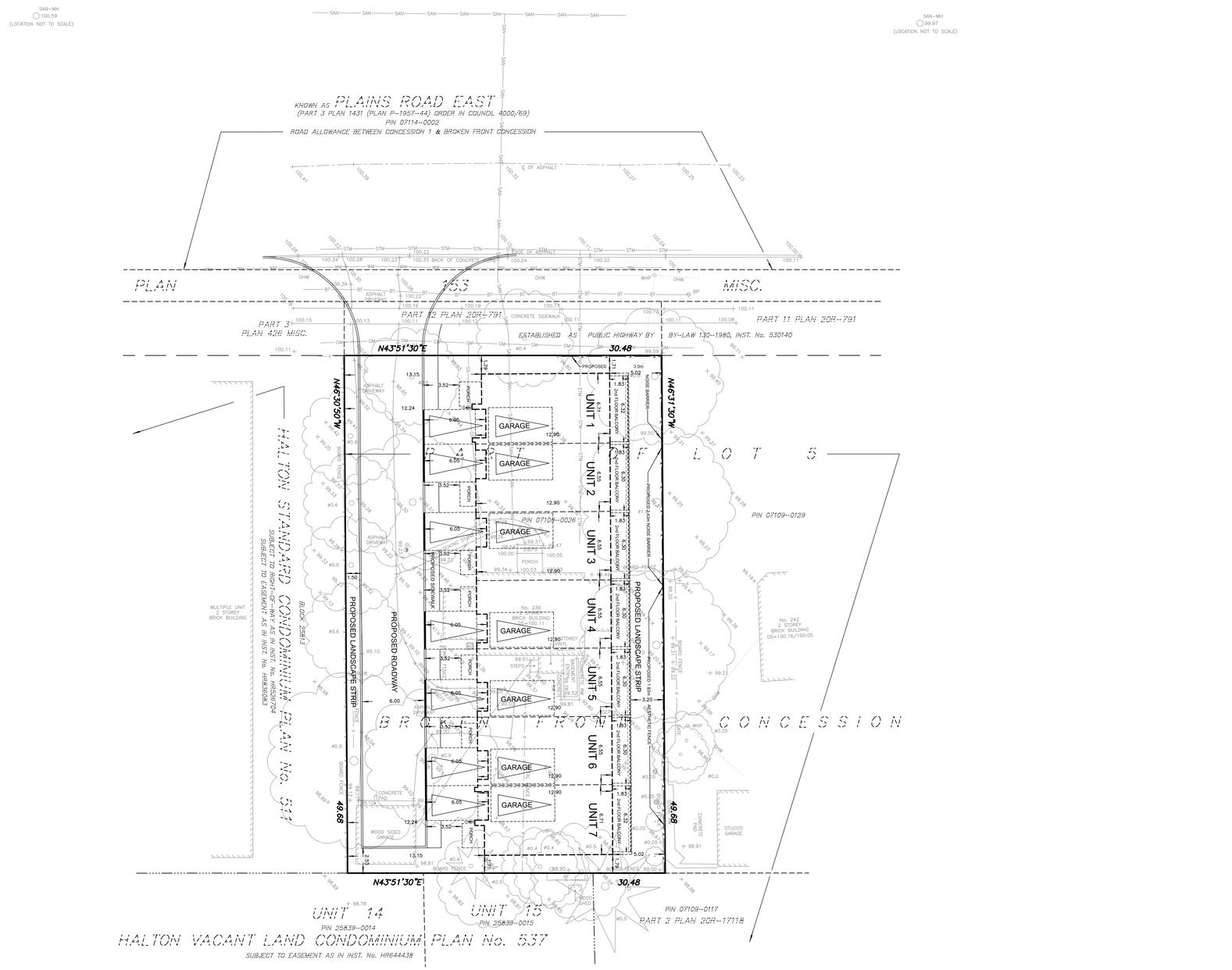
	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9





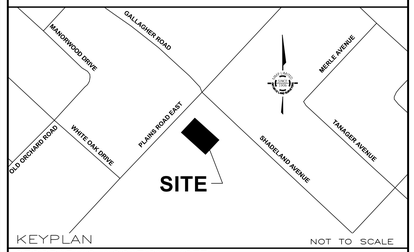
URBANTRANS Engineering Solutions Inc.	Project Name: 236 Plains Road East City of Burlington	Drawing Title: AutoTURN Analyis Passenger Car (P TAC-2017)	
		Drawing No.: Figure 6	Date: November 14, 2023
		Project No.: UT-23-041	Drawn By: AS
		Scale: NTS	Notes:

Appendix A
Proposed Site Plan



236 PLAINS ROAD EAST

PLAN FOR COMMITTEE OF ADJUSTMENT



GEOGRAPHIC LOCATION NOTE

PART OF

LOT 5
BROKEN FRONT CONCESSION

GEOGRAPHIC TOWNSHIP OF EAST FLAMBOROUGH

NOW IN THE

CITY OF BURLINGTON

REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 200

0 5 10 20 metres

MacKAY, MacKAY & PETERS LIMITED-ONTARIO LAND SURVEYORS

© 2023

METRIC *DISTANCES SHOWN HEREON ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048*

LEGEND

PIN DENOTES PROPERTY IDENTIFICATION NUMBER

DENOTES TYPICAL PARKING SPACE OF MIN. 2.75m X 6.00m

BENCHMARK NOTE

CITY OF BURLINGTON BENCHMARK No. 298

ELEVATION = 97.915 METRES (CGVD2878 ADJUSTMENT)

BENCHMARK SET ON CITY PLATE ON SOUTH FACE AT SOUTHEAST CORNER OF GLENVIEW PUBLIC SCHOOL No. 143 TOWNSEND AVENUE

CITY OF BURLINGTON ZONING BY-LAW 2020
EXISTING ZONING REGULATION - RM1-346

ZONE	REQUIRED	PROVIDED
LOT WIDTH @ 9.1m	20.0m (min)	30.48m
LOT AREA	0.1 ha (min)	0.1513 ha
FRONT YARD	12.0m (min)	1.71m
REAR YARD	9.0m (min)	1.71m
SIDE YARD	10% OF ACTUAL LOT WIDTH (3.05m)	5.02m
STREET SIDE YARD	9m (min)	N/A
BUILDING HEIGHT	2.5 STOREYS (max)	3 STOREYS
LANDSCAPE AREA & BUFFER ABUTTING RE2.1 AND R5 ZONES	6m (min)	3.20m (EAST) 1.35m (WEST)
DEEMED STREET WIDTH	36m	36.58m
PROHIBITED USE: TOWNHOUSE		

NOTES

- PROPOSED TIES SHOWN HEREON ARE TO FOUNDATION ONLY
- BUILDING DIMENSIONS WERE TAKEN FROM PLANS SUPPLIED BY THE CLIENT
- CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND JOB CONDITIONS BEFORE PROCEEDING WITH WORK
- PROPERTY DIMENSIONS ARE AS SHOWN ON SURVEYOR'S REAL PROPERTY REPORT BY MMP LIMITED DATED MAY 3, 2023 (23–044)
- PROPOSED BUILDINGS ARE POSITIONED BY CALCULATION, NOT BY AN ACTUAL SURVEY
- THIS PROPOSED PLAN IS PRELIMINARY UNTIL THE APPROPRIATE BUILDING DEPARTMENT'S SIGNED APPROVAL HAS BEEN OBTAINED
- ANY AMENDMENT OR ALTERATION OF THIS PLAN MUST BE REPORTED TO MMP LIMITED PRIOR TO LAYOUT OF BUILDING IN THE FIELD
- UTILITIES AND SERVICES SHOWN ON THIS SKETCH ARE APPROXIMATE AND MUST BE VERIFIED BEFORE CONSTRUCTION

CAUTION

- THIS IS NOT AN ORIGINAL COPY UNLESS EMBOSSED
- THIS PRODUCT SHALL NOT BE USED EXCEPT FOR THE PURPOSES INDICATED IN THE TITLE BLOCK
- THIS PRODUCT IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED FOR TRANSACTION OR MORTGAGE PURPOSES
- THIS SITE PLAN IS PROTECTED BY COPYRIGHT INCLUDING ALL RELATED DIGITAL PRODUCTS

CERTIFICATION NOTE

BOUNDARY DIMENSIONS SHOWN HEREON ARE DERIVED FROM LAND REGISTRY OFFICE RECORDS AND SURVEY RECORDS OF MMP LIMITED

WE HAVE REVIEWED THE PLANS FOR CONSTRUCTION OF SEVEN 3 STOREY TOWNHOMES LOCATED AT 236 PLAINS ROAD EAST AND CERTIFY THAT:

PROPOSED BUILDING SETBACKS AS SHOWN
PROPOSED BUILDING HEIGHTS AS SHOWN
PROPOSED BUILDING SITE STATISTICS AS SHOWN

NOVEMBER 1, 2023
DATE

DRAFT

ROY C. MAYO
ONTARIO LAND SURVEYOR
FOR: MACKAY, MACKAY & PETERS LIMITED

No.	DATE	REVISIONS
2	NOVEMBER 1, 2023	REVISED BUILDINGS AS PER CLIENTS INSTRUCTIONS
1	OCTOBER 13, 2023	SITE PLAN COMPLETED

MMP
MacKay, MacKay & Peters Limited
LAND SURVEYORS & MAPPERS
SINCE 1906

3380 South Service Road
Unit 101
Burlington, ON
L7N 3J5
(905) 639-1375

halton@mmplimited.com
mmplimited.com

E:\(20) Halton\(TWP) FLAMBOROUGH EAST\BF CON\LOT 5\23-044\SP\23-044-SP.dwg

DRAWN BY:	CHECKED BY:	PROJECT No.	DWG. NO.
K.J.D.		23-044-SP	1

Appendix B
Transit Route Services

Route 1 Plains/ Fairview

Effective Sept. 3, 2023

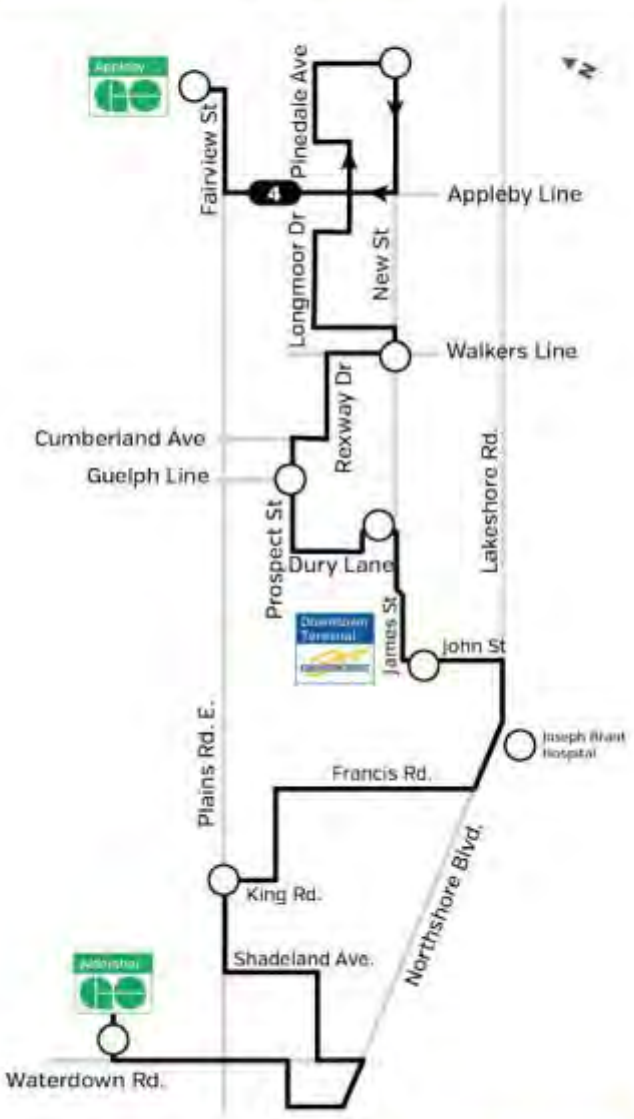


Burlingtontransit.ca
905-639-0550
contactbt@burlington.ca
#BurlONTransit

BURLINGTON TRANSIT

Route 4 Central

Effective Sept. 3, 2023



Burlingtontransit.ca
905-639-0550
contactbt@burlington.ca
#BurlONTransit

BURLINGTON TRANSIT

Appendix C
ITE LUC 220 Trip Generation Calculations

Query | Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
220

LAND USE GROUP:
(200-299) Residential

LAND USE :
220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY:
Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

INDEPENDENT VARIABLE (IV):
Dwelling Units

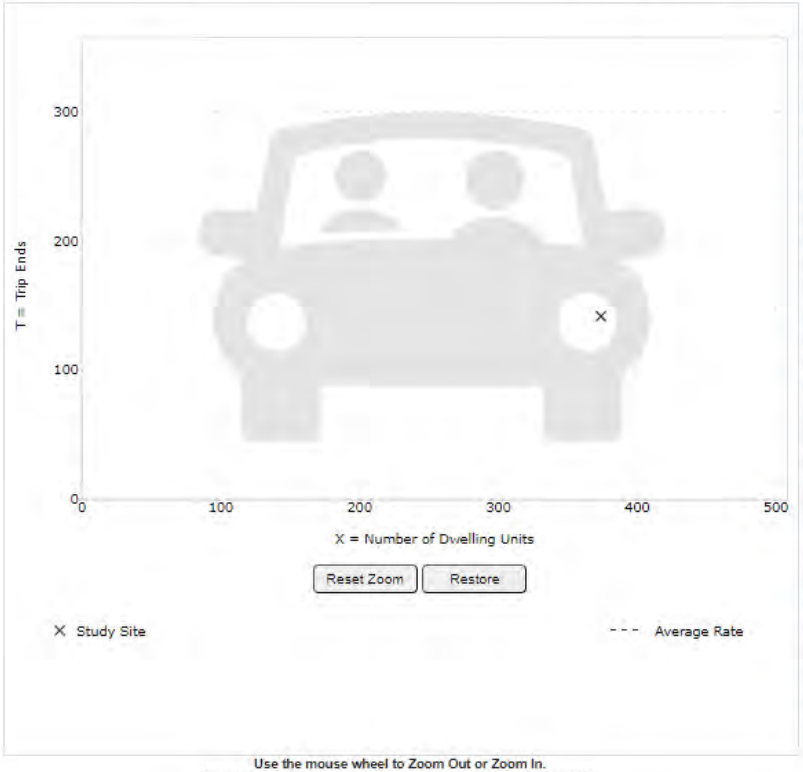
TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffi

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
7 Calculate

Data Plot and Equation

Caution – Small Sample Size



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Low-Rise) - Close to Rail Transit (220) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
1

Avg. Num. of Dwelling Units:
374

Average Rate:
0.38

Range of Rates:
0.38 - 0.38

Standard Deviation:
****

Fitted Curve Equation:
Not Given

R^2:
****

Directional Distribution:
29% entering, 71% exiting

Calculated Trip Ends:
Average Rate: 3 (Total), 1 (Entry), 2 (Exit)

Query | Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
220

LAND USE GROUP:
(200-299) Residential

LAND USE :
220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY:
Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

INDEPENDENT VARIABLE (IV):
Dwelling Units

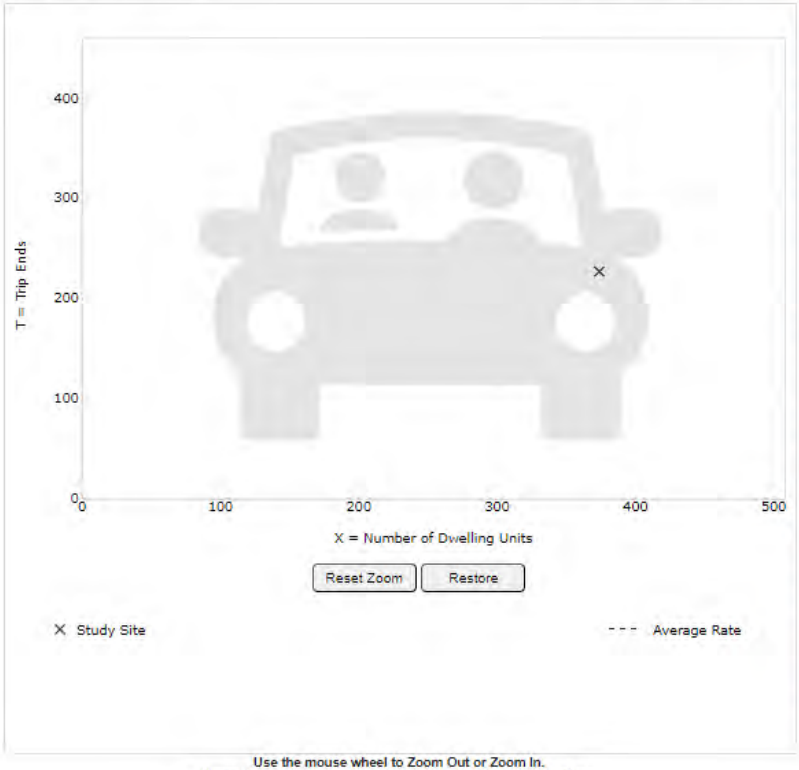
TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
7 Calculate

Data Plot and Equation

Caution – Small Sample Size



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Low-Rise) - Close to Rail Transit (220) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
1

Avg. Num. of Dwelling Units:
374

Average Rate:
0.61

Range of Rates:
0.61 - 0.61

Standard Deviation:
****

Fitted Curve Equation:
Not Given

R^2:
****

Directional Distribution:
60% entering, 40% exiting

Calculated Trip Ends:
Average Rate: 4 (Total), 3 (Entry), 1 (Exit)

Appendix D
ITE Parking Generation Manual 5th Edition (LUC 220)

Multifamily Housing (Low-Rise)
(220)

Peak Period Parking Demand vs: Dwelling Units
On a: Weekday (Monday - Friday)
Setting/Location: Dense Multi-Use Urban (no nearby rail transit)
Peak Period of Parking Demand: 11:00 p.m. - 6:00 a.m.
Number of Studies: 12
Avg. Num. of Dwelling Units: 27

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.76	0.15 - 1.00	0.50 / 0.96	***	0.25 (33%)

Data Plot and Equation

