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**Noise Feasibility Study**  
**Proposed 4-Storey Residential Development**  
**PRE-2023-0274 and PR2023-0116**  
**15, 21, 27 Shore Street**  
**Caledon, Ontario**

Prepared for:

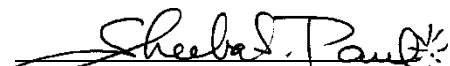
Bolton Shore Holdings Ltd.  
P.O. Box 174 Station Main  
Bolton, Ontario  
L7E 5T2

Prepared by



  
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Reviewed by

  
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September 11, 2024

HGC Project No. 02400323

# VERSION CONTROL

Noise Feasibility Study,  
2170 Ghent Avenue,  
Burlington, Ontario.

Ver.	Date	Version Description / Changelog	Prepared By
1.0	September 11, 2024	Noise Feasibility Study in support of the planning and approvals process	V. Garcia

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ACOUSTICS



NOISE



VIBRATION

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# 1 Introduction and Summary

HGC Engineering was retained by Bolton Shore Holdings Ltd. to conduct a noise feasibility study for a proposed 4-storey residential development located at 15, 21, 27 Shore Street in Caledon, Ontario. This proposed development will consist of one 4-storey building and associated parking. The noise feasibility study is required as part of the approvals process.

The primary noise source impacting the site was determined to be road traffic on Highway 50. To the south and east of the site are existing commercial uses. To the north and west of the site are existing residential lands as well as on the east side of Highway 50.

Road traffic data for Highway 50 was obtained from the Region of Peel. This data was used to predict future sound levels at the proposed development. The predicted sound levels were compared to the guidelines of the Ministry of Environment, Conservation, and Parks (MECP) to develop noise control recommendations for the proposed site.

The sound level predictions indicate that the future road traffic sound levels will exceed MECP guidelines at the proposed building. An alternative means of ventilation to open windows is required. Any building construction meeting the minimum requirements of the Ontario Building Code will provide sufficient acoustical insulation for the indoor spaces for all future dwellings. Noise warning clauses are required for the dwelling units within the proposed building in the property and tenancy agreements and offers of purchase and sale to inform the future occupants of traffic noise, and adjacent land uses.

A computer model of the area was created to predict the sound levels at the facades of the proposed building due to off-site stationary noise sources from existing commercial facilities around the site. The results indicate that the sound emissions of the nearby stationary noise sources are within the MECP guideline sound levels at the proposed development. Noise mitigation for existing stationary noise sources is not required.



## 2 Site Description and Noise Sources

The site is located at 15, 21, 27 Shore Street in Caledon, Ontario, as indicated in Figure 1. The proposed residential development will include one 4-storey residential building along with associated parking. Figure 2 shows a proposed site plan prepared by Fausto Cortese Architects dated August 12, 2024.

HGC Engineering personnel visited the May 2024. The acoustical environment surrounding the site is urban in nature. There are currently three dwellings located on the subject site which will be demolished. Road traffic on Highway 50 was confirmed to be the dominant noise source. Shore Street was not considered in the analysis as it is a low volume roadway. There are existing residential lands to the west, north, and on the east side of Highway 50. There are commercial uses immediately to the south and east of the site. To the east is the Bolton Vision Centre, and to the south is the Bolton Family Dental Centre as well as a commercial plaza including a Pizza Nova and Jiffy Lube among other uses. Figure 3 shows an aerial photo of the surrounding lands uses. There are no other significant sources of stationary noise within 500 m of the subject site.

## 3 Traffic Noise Assessment

### 3.1 Road Traffic Noise Criteria

Guidelines for acceptable levels of road traffic noise impacting residential developments are given in the MECP publication NPC-300, “Environment Noise Guideline Stationary and Transportation Sources – Approval and Planning”, Part C release date October 21, 2013, and are summarized in Table 1. The values in Table 1 are energy equivalent (average) sound levels [L<sub>EQ</sub>] in units of A-weighted decibels [dBA].

**Table 1: MECP Road Traffic Noise Criteria (dBA)**

Area	Daytime L <sub>EQ</sub> (16 hour) Road	Nighttime L <sub>EQ</sub> (8 hour) Road
Outdoor Living Area	55 dBA	--
Inside Living/Dining Room	45 dBA	45 dBA
Inside Bedroom	45 dBA	40 dBA

Daytime is considered to be the period between 07:00 and 23:00, while the time between 23:00 and 07:00 is classified as nighttime. The term “Outdoor Living Area” (OLA) is used in reference to an outdoor patio, backyard, terrace or other area where passive recreation is expected to occur. Balconies that are less than 4 m in depth are not considered to be OLAs under MECP guidelines.

The MECP guidelines allow the daytime sound levels in an OLA to be exceeded by up to 5 dBA, without mitigation, if warning clauses are placed in the purchase and rental agreements to the property. Where OLA sound levels exceed 60 dBA, physical mitigation is recommended to reduce the OLA sound level to below 60 dBA and as close to 55 dBA as technically, economically and administratively feasible. The Town of Caledon requires 55 dBA in the OLA’s. If higher sound levels are to be achieved in the OLA’s, it is the proponent’s responsibility to delegate Council to seek relief from the 55 dBA requirement for the amenity areas. The maximum acoustic fence height is 2.4 m. The remainder of the acoustic barrier height can be made up with an earth berm.

A central air conditioning system as an alternative means of ventilation to open windows is required for dwellings where nighttime sound levels outside bedroom/living/dining room windows exceed 60 dBA or daytime sound levels outside bedroom/living/dining room windows exceed 65 dBA. Forced-air ventilation with ducts sized to accommodate the future installation of air conditioning is required when nighttime sound levels at bedroom/living/dining room windows are in the range of 51 to 60 dBA or when daytime sound levels at bedroom/living/dining room windows are in the range of 56 to 65 dBA.

Building components such as walls, windows and doors must be designed to achieve indoor sound level criteria when the plane of window nighttime sound level is greater than 60 dBA or the daytime sound level is greater than 65 dBA due to road traffic noise.

Warning clauses to notify future residents of possible excesses are also required when nighttime sound levels exceed 50 dBA at the plane of the bedroom/living/dining room window and daytime sound levels exceed 55 dBA in the outdoor living area and at the plane of the bedroom/living/dining room window due to road traffic.



## 3.2 Traffic Noise Predictions

### 3.2.1 Road Traffic Data

Ultimate road traffic data for Highway 50 was obtained from the Region of Peel and is provided in Appendix A. A commercial vehicle percentage of 4.1% for Highway 50 was split into 1.5% medium trucks and 2.6% heavy trucks. A day/night split of 90/10% was used in the analysis. Highway 50 has a posted speed limit of 50 km/h; therefore 60 km/h was used in the analysis in accordance with the Town of Caledon requirements. Table 2 summarizes the traffic data.

**Table 2: Ultimate Road Traffic Data**

Road Name		Cars	Medium Trucks	Heavy Trucks	Total
Highway 50	Daytime	27 965	437	758	29 160
	Nighttime	3 107	49	84	3 240
	<b>Total</b>	<b>31 072</b>	<b>486</b>	<b>842</b>	<b>32 400</b>

### 3.2.2 Road Traffic Noise Predictions

To assess the levels of the road traffic noise, which will impact the study area in the future, sound level predictions were made using STAMSON version 5.04, a computer algorithm developed by the MECP. Sample STAMSON output is included in Appendix B.

Predictions of the traffic sound levels were made at representative façades. Reflective surfaces were used in the analysis. Table 3 summarizes the predicted sound levels at the sound level prediction location as indicated in Figure 2.

**Table 3: Predicted Road Traffic Sound Levels [dBA] Without Mitigation**

Prediction Location	Description	Daytime in OLA L <sub>EQ-16 hr</sub>	Daytime at Façade L <sub>EQ-16 hr</sub>	Nighttime at Façade L <sub>EQ-8 hr</sub>
A	Eastern façade of proposed building	--	61	54

### 3.3 Discussion and Recommendations

The sound level predictions indicate that future traffic levels will exceed MECP guidelines at the façades with exposure to the roadway. Recommendations to address these excesses are discussed in this section.

#### 3.3.1 Outdoor Living Areas

There are no common outdoor amenity spaces indicated on the site plan. Private balconies and terraces may be provided for the dwelling units. Balconies and terraces less than 4 m in depth are proposed for the building which are not considered OLAs by the MECP and do not require further mitigation.

#### 3.3.2 Indoor Living Areas and Ventilation Requirements

##### Alternative Means of Ventilation to Open Windows

The predicted sound levels for dwellings closest to the roadway were determined to be in the range of 55 to 65 dBA during daytime hours and in the range of 50 to 60 dBA during nighttime hours. To address this excess, the dwelling units will require an alternative means of ventilation to open windows.

Window or through-the-wall air conditioning units are not recommended for any residential units because of the noise they produce and because the units penetrate through the exterior wall which degrades the overall noise insulating properties of the envelope. The location, installation and sound ratings of the outdoor air conditioning devices should minimize noise impacts and comply with criteria of MECP publication NPC-300, as applicable. The guidelines also recommend warning clauses for all units with ventilation requirements.



### 3.3.3 Building Façade Construction

For the proposed building, the sound level will be less than 60 dBA during the nighttime hours and less than 65 dBA during the daytime hours. For the building, any exterior wall, and double-glazed window construction meeting the minimum requirements of the Ontario Building Code (OBC) will provide adequate sound insulation for the dwelling units.

### 3.3.4 Warning Clauses

The MECP guidelines recommend that warning clauses be included in the property and tenancy agreements for the dwelling units with anticipated traffic sound level excesses. Examples are provided.

Suggested wording for future dwellings with sound level exceeding the MECP criteria.

Type B:

Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic may on occasion interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.

Suitable wording for future dwellings requiring the provision for adding central air conditioning at the occupant's discretion is given below.

Type C:

This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound limits of the Municipality and the Ministry of the Environment.

These clauses are provided as examples and can be modified by the Municipality as required.

## 4 Impact of the Development on Itself

Section 5.8.1.1 of the Ontario Building Code (OBC), released on January 1, 2020, specifies the minimum required sound insulation characteristics for demising partitions, in terms of Sound Transmission Class (STC) or Apparent Sound Transmission Class (ASTC) values. In order to



maintain adequate acoustical privacy between separate suites in a multi-tenant building, inter-suite walls must meet or exceed STC-50 or ASTC-47. Suite separation from a refuse chute or elevator shaft must meet or exceed STC-55. In addition, it is recommended that the floor/ceiling constructions separating suites from any amenity or commercial spaces also meet or exceed STC-55. Tables 1 and 2 in Section SB-3 of the Supplementary Guideline to the OBC provide a comprehensive list of constructions that will meet the above requirements.

Tarion's Builder Bulletin B19R requires the internal design of condominium projects to integrate suitable acoustic features to insulate the suites from noise from each other and amenities in accordance with the OBC, and limit the potential intrusions of mechanical and electrical services of the buildings on its residents. If B19R certification is needed, an acoustical consultant is required to review the mechanical and electrical drawings and details of demising construction and mechanical/electrical equipment, when available, to help ensure that the noise impact of the development on itself is maintained within acceptable levels.

## 5 Impact of the Development on the Environment

Sound levels from noise sources such as rooftop air-conditioners, cooling towers, exhaust fans, etc. should not exceed the minimum one-hour  $L_{EQ}$  ambient (background) sound level from road traffic, at any potentially impacted residential point of reception. Based on the levels observed during our site visit, the typical minimum ambient sound levels in the area are expected to exceed 50 dBA during the day and 45 dBA at night. Thus, any electro-mechanical equipment associated with this development (e.g. emergency generator testing, air handling or air conditioning equipment, etc.) should be designed such that they do not result in noise impact beyond the minimum background sound levels.



## 6 Stationary (Commercial) Noise Assessment

### 6.1 Noise Source Description

During our site visits, it was observed that the commercial plaza to the south and Bolton Family Dental Centre include rooftop mechanical equipment and the Jiffy Lube bay doors include some noise sources, which are considered to be stationary sources of noise. The dental facility and various uses within the commercial plaza operate during daytime hours only (07:00 to 23:00) with the exception of Pizza Nova which is open as late as 01:00. To the northeast of the site is the Bolton Vision Centre (238 Highway 50) which has some rooftop mechanical equipment, however, there is an existing 3-storey residential building directly to the south of it. Noise sources associated with the vision centre are not considered further as sound levels are required to be met at the neighbouring residential building. The remaining surrounding lands are existing residential lands.

### 6.2 Criteria for Acceptable Sound Levels (Stationary Noise)

An industrial facility is classified as a stationary source of sound (as compared to sources such as traffic or construction, for example) for noise assessment purposes. A stationary noise source encompasses the noise from all the activities and equipment within the property boundary of a facility including regular on-site truck traffic for deliveries, material handling and mechanical equipment. In terms of background sound, the development is located in an urban (Class 1) acoustical environment which is dominated by sound from road traffic and human activity.

NPC-300 is intended for use when considering both residential and commercial/institutional land uses under the Planning Act. It provides acceptability limits for sound due to commercial operations in that regard. The facade of a residence (i.e., in the plane of a window), or any associated usable outdoor area is considered a sensitive point of reception. NPC-300 stipulates that the exclusionary sound level limit for a stationary noise source in urban Class 1 and 2 areas are taken to be 50 dBA during daytime and evening hours (07:00 to 19:00 and 19:00 to 23:00), and 45 dBA during nighttime hours (23:00 to 07:00) at the plane of the windows of noise sensitive spaces. If the background sound levels due to road traffic exceed the exclusionary limits, then that background sound level becomes the criterion. The background sound level is



defined as the sound level that occurs when the source under consideration is not operating, and may include traffic noise and natural sounds.

Commercial activities such as the occasional movement of customer/employee vehicles, deliveries to retail facilities and restaurants and garbage collection are not of themselves considered to be significant noise sources in the MECP guidelines. Accordingly, these sources have not been considered in this study. The sound level limits as summarized in Table 4 are used in the following sections of this report as the applicable criteria for each façade of the proposed residential building.

**Table 4: Applicable Sound Level Limits,  $L_{EQ}$  (dBA) for Class I Areas**

Building	Façade	Sound Level Limits	
		Daytime & Evening (07:00 to 23:00)	Nighttime (23:00 to 07:00)
Proposed 4-Storey Building	All	50	45

Compliance with MECP criteria generally results in acceptable levels of sound at residential receptors although there may be residual audibility during periods of low background sound.

### 6.3 Stationary Source Assessment

Predictive noise modelling was used to assess the potential impact of sound from the nearby uses at the closest residential façades. The noise prediction model was based on sound emission levels for the nearby noise sources, assumed operational profiles (during the day and night), and established engineering methods for the prediction of outdoor sound propagation. These methods include the effects of distance, air absorption, and acoustical screening by barrier obstacles. The potentially significant noise sources and hours of operation are described in Section 6.1 above.

Site visits were conducted to observe the operations of the surrounding facilities. Assumptions based on HGC Engineering past projects for similar facilities have been used in conjunction with aerial photography in the analysis. Conservative data obtained from HGC Engineering project files was used in the analysis for the equipment operating on the commercial site. The source levels used in the analysis are listed in Table 5 below.

**Table 5: Source Sound Power Levels [dB re 10-12 W]**

Source	Octave Band Centre Frequency [Hz]								dBA
	63	125	250	500	1k	2k	4k	8k	
Lennox 060 (5-ton)	--	86	82	80	76	72	66	60	82
Pizza Nova Exhaust	78	94	94	80	72	71	65	57	81
Jiffy Lube Bay Doors	89	80	81	85	85	86	89	90	94

The above outlined sound levels and site features were used as input to a predictive computer model. The software used for this purpose (*Cadna-A Version 2023 MR1 build: 197.5343*) is a computer implementation of ISO Standard 9613-2.2 “Acoustics - Attenuation of Sound During Propagation Outdoors.” The ISO method accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation and acoustical shielding by intervening structures such as barriers.

The following information and assumptions were used in the analysis.

Commercial Plaza

- The rooftop units associated with the commercial plaza were assumed to be located as shown in Figure 4. The Lennox 5-ton units were assumed to be 2.0 m in height, and 1.5 m tall for the Pizza Nova exhaust fan. The bay doors associated with Jiffy Lube are approximately 4 m x 3 m in size.
- The hours of operation include daytime hours only (07:00 to 23:00) with the exception of Pizza Nova which is open until 01:00.

Receptors

- Proposed residential building in proposed development.

***Assumed daytime worst-case scenario:***

- All rooftop HVAC equipment operating for 40 minutes in an hour;
- Pizza Nova exhaust operating for a full hour;
- Noise emanating from the Jiffy Lube bay doors for 10 minutes in an hour

*Assumed night-time worst-case scenario:*

- All rooftop HVAC equipment operating for 20 minutes in an hour;
- Pizza Nova exhaust operating for a full hour until 01:00

## 6.4 Results

The calculations consider the acoustical effects of distance and shielding by the buildings. The predicted sound level from these sources at the proposed development are included in the following table.

**Table 6: Predicted Stationary Source Sound Levels at the Proposed Residential Building [dBA]**

Building	Façade	Criteria (Day/Night)	Day	Night
Proposed 4-Storey Building	Northwest	50 / 45	<30	<30
	Northeast	50 / 45	49	43
	Southeast	50 / 45	50	45
	Southwest	50 / 45	41	38

The results of this analysis indicate that the predicted sound levels due to operations of the neighbouring commercial uses are expected to be within the applicable criteria. Figures 5 and 6 show the daytime and nighttime sound levels at the façades of the proposed building from the surrounding noise sources.

The presence of the commercial/retail facilities should be addressed through the implementation of an additional warning clause in the tenancy and property agreements and offers of purchase and sale. A typical wording is:

Type E:

Purchasers/tenants are advised that due to the proximity of the proximity of the adjacent commercial/retail facilities, noise from these facilities may at times be audible.

## 7 Summary of Recommendations

The results of the study indicate that the proposed residential development is feasible. Future road traffic sound levels will exceed MECP guidelines, but feasible means exist to reduce the impact to within acceptable limits. The following recommendations are provided in regard to noise mitigation and summarized in Table 4:

1. An alternative means of ventilation to open windows is required.
2. Noise warning clauses should be included in all offers of purchase and sale and property tenancy agreements for the proposed building to inform future residents of the traffic noise issues and nearby commercial uses.
3. Any double-glazed window construction and exterior wall construction meeting the minimum OBC requirements will provide adequate sound insulation for all of the proposed dwellings in the building.

Table 7 summarizes the recommendations for the proposed residential development.

**Table 7: Summary of Noise Control Requirements and Noise Warning Clauses**

Prediction Location	Acoustic Barrier	Ventilation Requirements*	Type of Warning Clause	Upgraded Building Constructions
All	--	Provision for installation of air conditioning by the occupant	B, C, E	OBC

Note:

\* The location, installation, and sound rating of the air conditioning condensers must be compliant with MECP Guideline NPC-216.

-- No specific requirement

OBC – meeting the minimum Ontario Building Code requirements

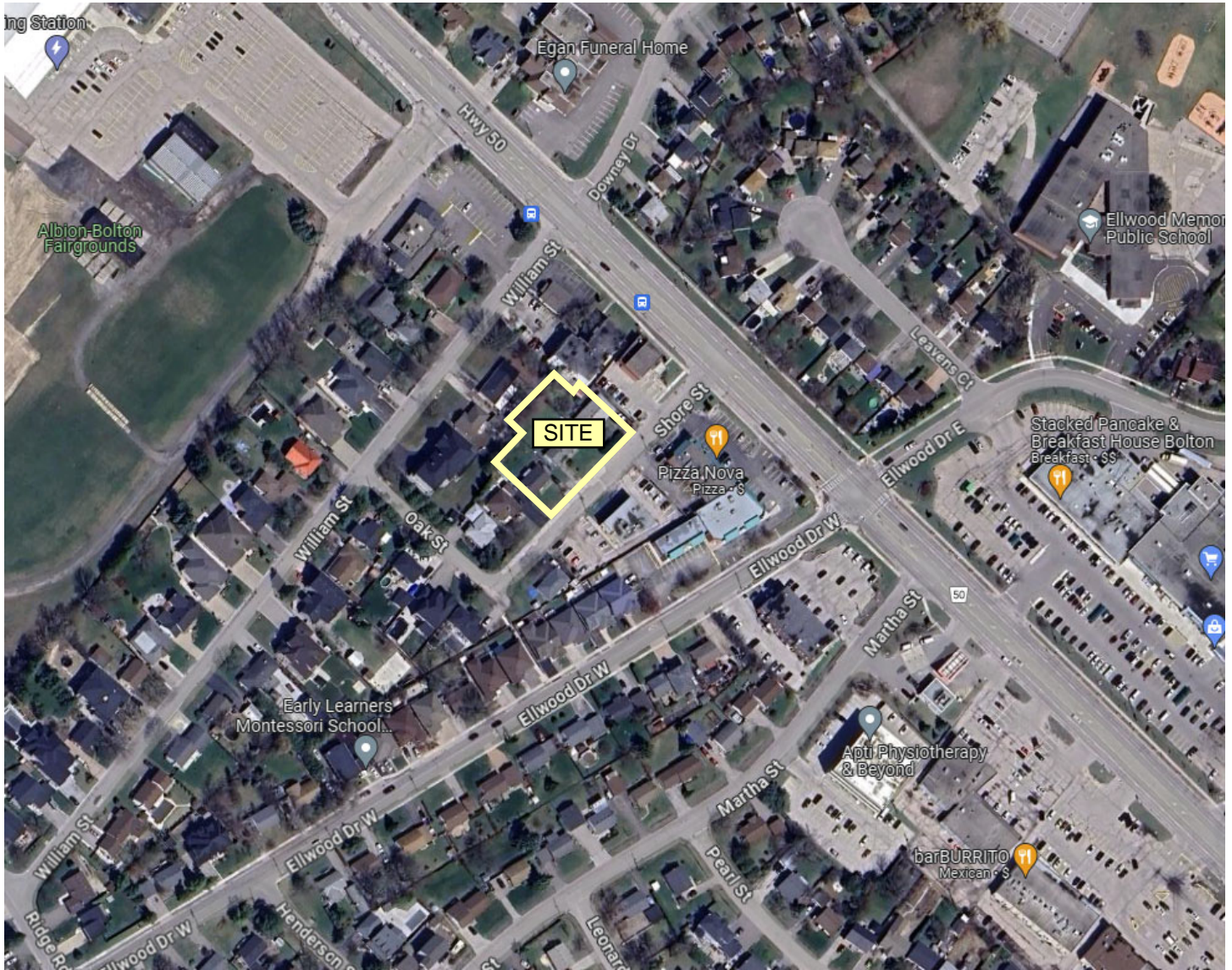


Figure 1 - Key Plan



ACOUSTICS

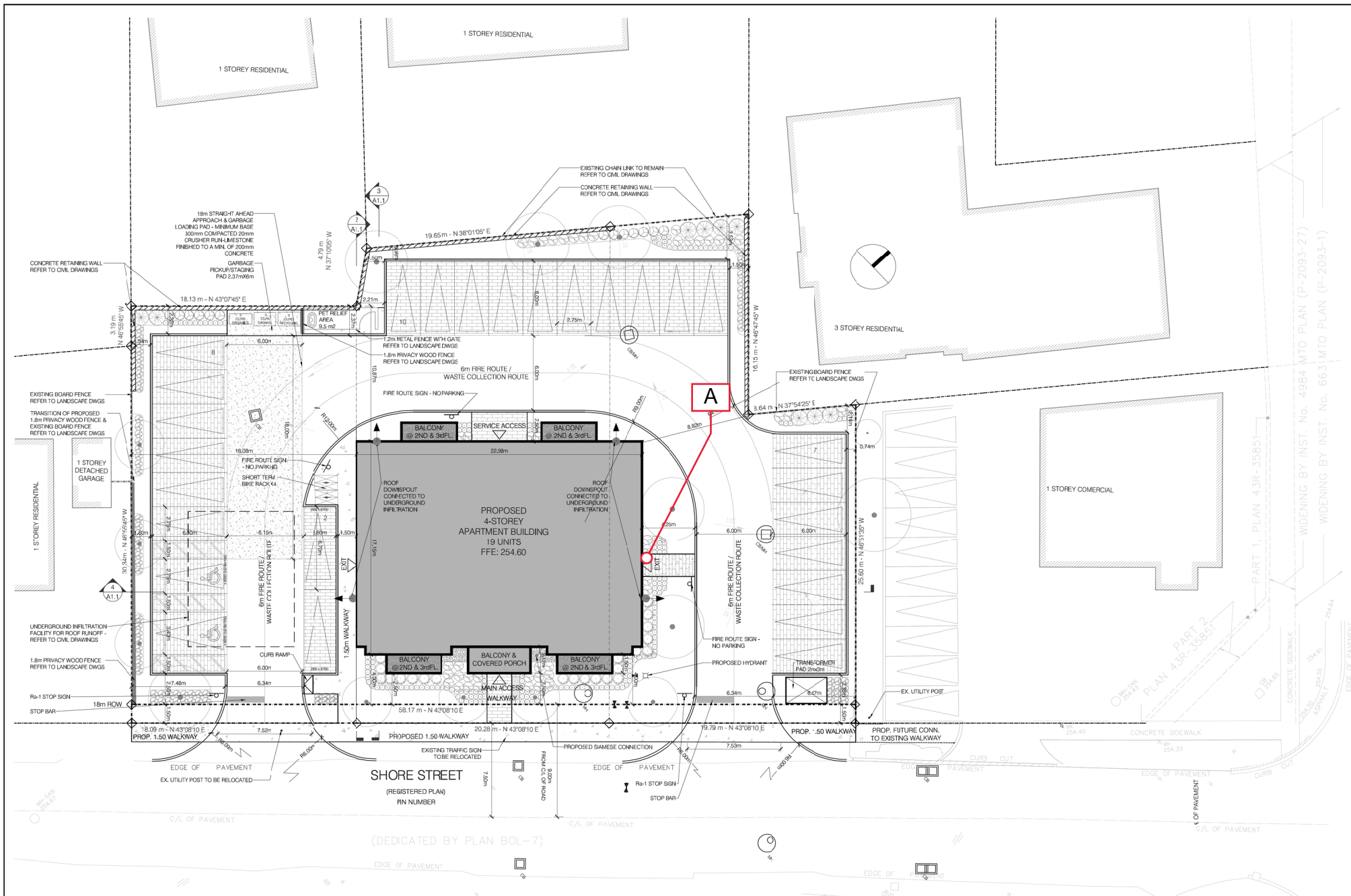


NOISE

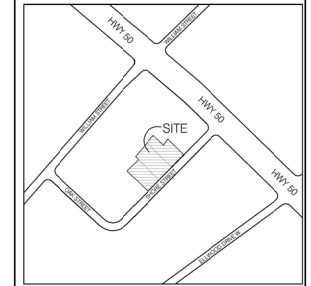


VIBRATION





SITE PLAN LEGEND	
	DENOTES CATCHBASIN REFER TO CIVIL DWGS
	DENOTES CATCHBASIN/MANHOLE REFER TO CIVIL DWGS
	DENOTES MANHOLE REFER TO CIVIL DWGS
	DENOTES BIKE STORAGE
	DENOTES TREES/PLANTS REFER TO LANDSCAPE DWGS
	DENOTES WASTE RECEPTACLE
	DENOTES UNIT PAVING REFER TO LANDSCAPE DWGS
	DENOTES CONCRETE PAVING REFER TO LANDSCAPE DWGS
	DENOTES RETAINING WALL REFER TO LANDSCAPE DWGS



SITE DEVELOPMENT			
	EXISTING	REQUIRED	PROPOSED
ZONE	C255 & R1	RM	RM-000X
TOTAL LOT AREA		925.00 m <sup>2</sup>	2067.32 m <sup>2</sup>
TOTAL LOT AREA AFTER ROAD WIDENING		925.00 m <sup>2</sup>	1980.00 m <sup>2</sup>
LOT FRONTAGE		30.00 m	58.17 m
COVERAGE		2%	19.64% (288.83m <sup>2</sup> )
MAX. HEIGHT		12.20 m	13.87 m
FRONT SETBACK		(9.00 m MIN.)	4.00 m
REAR SETBACK		(7.50 m MIN.)	10.87 m
LEFT SIDEYARD		(7.50 m MIN.)	18.08 m
RIGHT SIDEYARD		(7.50 m MIN.)	8.82 m
NUMBER OF UNITS			19
PARKING RATE		54 (1.75 PER UNIT)	27 (1.42 PER UNIT)
PARKING SETBACK		6m	2.50m
DRIVEWAY SETBACK		0.3m	6.57m (E) 7.48m (W)
LANDSCAPED AREA		4%	21.2% (420m <sup>2</sup> )
LANDSCAPED BUFFER		3m	VARIES (SEE SITE PLAN)
PRIVACY YARD DEPTH (1st FLOOR WINDOWS)		5m	VARIES (SEE SITE PLAN)
PLAY FACILITY AREA		4% (82.67m <sup>2</sup> )	0m <sup>2</sup>
AMENITIES (UNDERGROUND)			126m <sup>2</sup>
SHORT-TERM BIKE ST.			4
LONG-TERM BIKE ST.			10 (0.5/Unit)
NET RESIDENTIAL AREA			1,225.66 m <sup>2</sup> 13,193 SF
GFA			1,557.39 m <sup>2</sup> 16,764 SF
DENSITY (UNIT / HECTARE)			96
FS (GFA / LOT AREA)			0.78

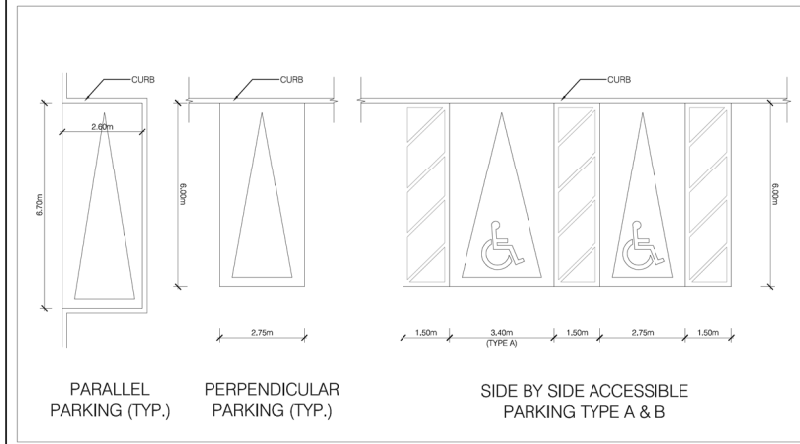
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8	ISSUED FOR COORDINATION	2024-06-24
7	ISSUED FOR REVIEW	2024-02-20
6	ISSUED FOR PAC	2023-11-13
5	ISSUED FOR CLIENT REVIEW	2023-11-08
4	ISSUED FOR CLIENT REVIEW	2023-10-31
3	ISSUED FOR CLIENT REVIEW	2023-09-21
2	ISSUED FOR CLIENT REVIEW	2023-08-24
1	ISSUED FOR PAC	2023-05-11

ISSUED FOR CONSTRUCTION  
 ISSUED FOR BID  
 ISSUED FOR BUILDING PERMIT  
 ISSUED FOR SITE PLAN APPROVAL  
 SUBMITTALS  
 CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND MUST REPORT ANY DISCREPANCIES TO THE DESIGNER BEFORE PROCEEDING WITH CONSTRUCTION.  
 THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION PURPOSES UNTIL SEALED AND SIGNED BY THE DESIGNER.  
 DO NOT SCALE DRAWINGS.

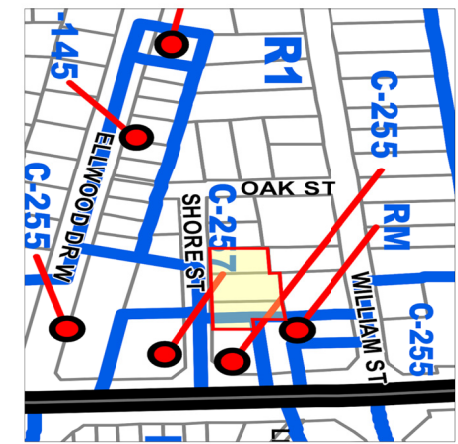
**FCA**  
**FAUSTO CORTESE ARCHITECTS**  
 3590 RUTHERFORD RD. UNIT 7  
 VAUGHAN, ONTARIO, L4H 3T8  
 416-806-7000  
 FCORTESE@FCARCHITECTS.CA

DRAWING: PROPOSED MULTI-UNIT RESIDENTIAL	
15, 21, 27 SHORE ST. BOLTON, ON	
CALEDON	
DRAWING: SITE PLAN	
PLOTTED: N/A	
DATE: 12/28/2024	PROJECT No:
SCALE:	DRAWING No:
DRAWN BY: S.H.	REVIEWED BY: F.C.
A100	

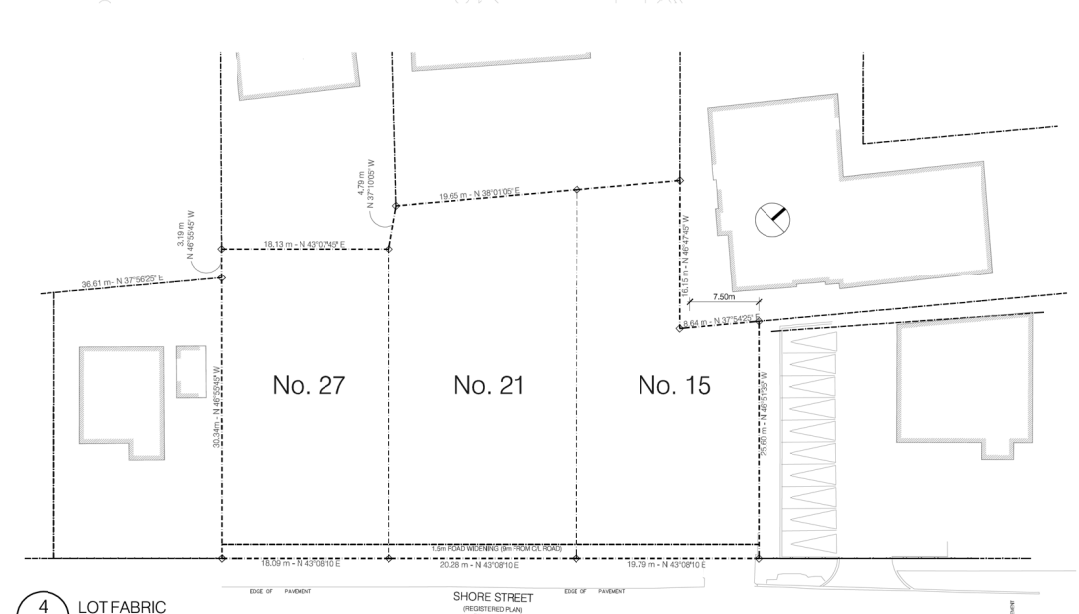
1 SITE PLAN  
 A100 SCALE: 1:250



2 PARKING STANDARDS  
 A100 SCALE: 1:150



3 ZONING MAP



4 LOT FABRIC

Figure 2 - Proposed Site Grading Plan Showing Prediction Locations

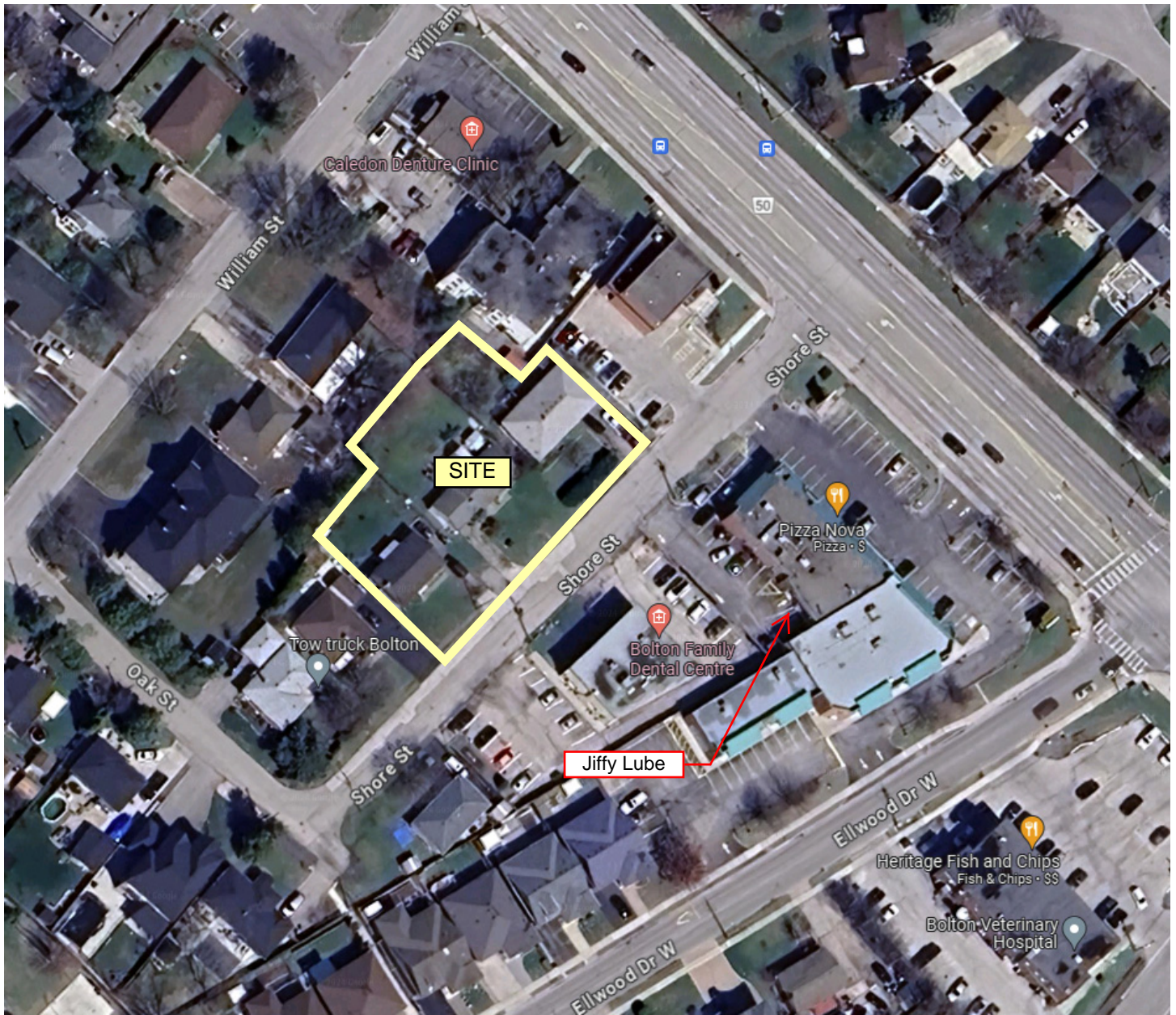


Figure 3 - Aerial Photo Showing Surrounding Land Uses



Figure 4: Aerial Photo Showing Noise Source and Receptor Locations

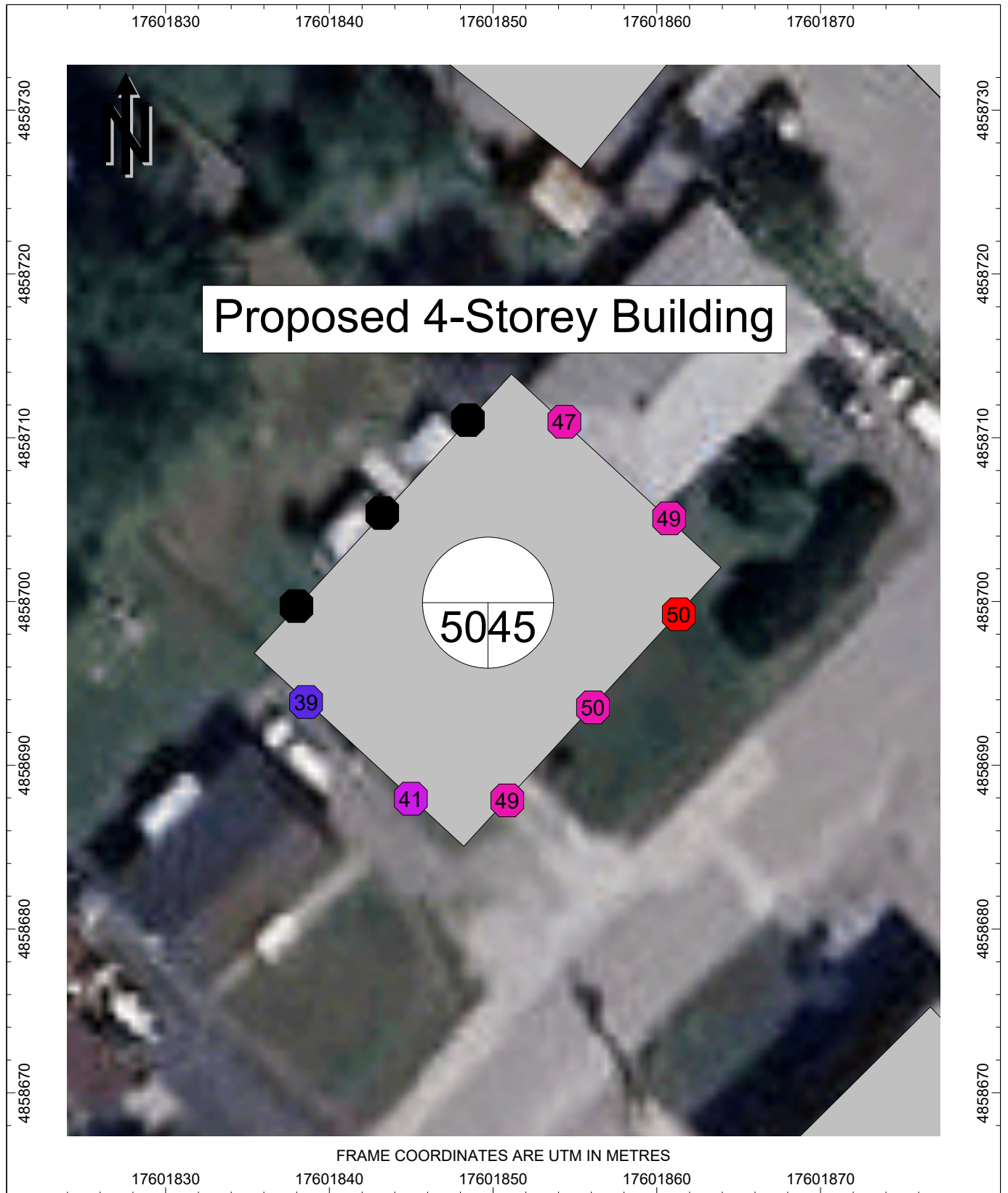


Figure 5: Aerial Photo Showing Daytime Sound Levels, dBA, at the Proposed Building from Surrounding Commercial Facilities

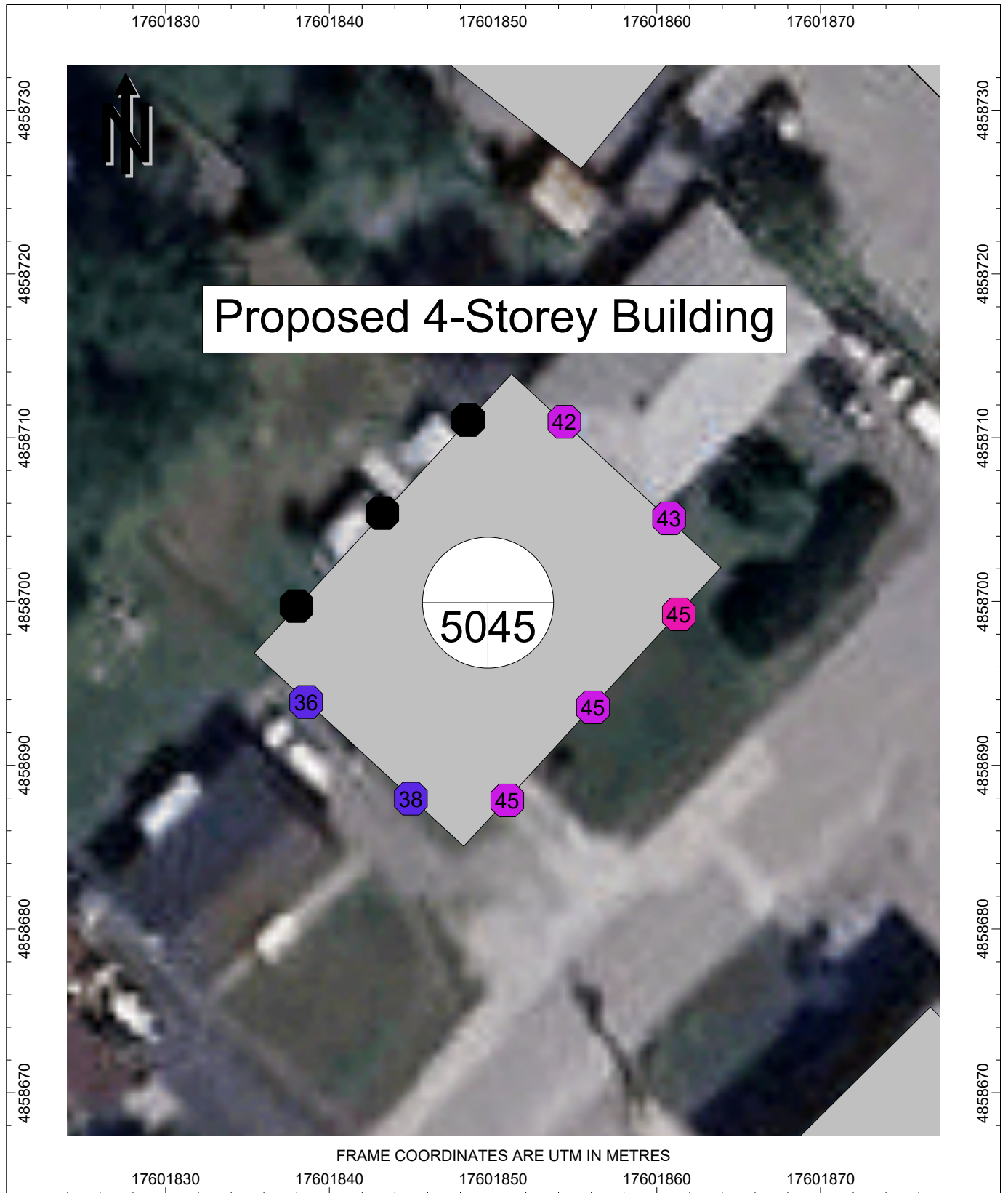


Figure 6: Aerial Photo Showing Nighttime Sound Levels, dBA, at the Proposed Building from Surrounding Commercial Facilities

# APPENDIX A

## Road Traffic Data



ACOUSTICS



NOISE



VIBRATION

**Date:** April 23, 2024  
**Requestor:** Victor Garcia, HGC Engineering  
**Request Type:** Noise Traffic Data Request  
**Location:** Hwy 50 - 300m North of Queensgate Blvd

Victor Garcia,  
 As per your request, we are providing the following 2019 traffic data:

	<b>Existing</b>	<b>Ultimate</b>
24 Hour Traffic Volume	26060	32400
# of Lanes	4	4
Day/Night Split	90/10	90/10
Day Trucks (% of Total Volume)	1.2% Medium 2.6% Heavy	1.2% Medium 2.6% Heavy
Night Trucks (% of Total Volume)	1.5% Medium 1.6% Heavy	1.5% Medium 1.6% Heavy
Right-of-Way Width	45 meters	
Posted Speed Limit	50 km/h	

Please note:

1. The current volume is not the Annual Average Daily Traffic, but the averaged raw volumes over three data collection days. If you need the Annual Average Traffic Volume, please visit the Peel Open Data website below:

<http://opendata.peelregion.ca/data-categories/transportation/traffic-count-stations.aspx>

2. The ultimate volume is the planned volume during a level of service 'D' where a 2 second vehicle headway and a volume to capacity ratio of 0.9 is assumed. Traffic signals and hourly variations in traffic are also incorporated into the ultimate volume.

If you require further assistance, please contact me at [transportationplanningdata@peelregion.ca](mailto:transportationplanningdata@peelregion.ca)

Regards,  
**Karan Bedi**

Intermediate Planner, Transportation Planning  
 Transportation Division | Public Works | Region of Peel  
 10 Peel Centre Drive, Suite B, 4th Floor  
 Brampton, ON L6T 4B9

# APPENDIX B

Sample STAMSON 5.04 Output



ACOUSTICS



NOISE



VIBRATION



Filename: a.te                                              Time Period: Day/Night 16/8 hours

Description: Eastern facade of proposed building

Road data, segment # 1: Hwy 50 (day/night)

```
-----
Car traffic volume   : 27964/3107   veh/TimePeriod   *
Medium truck volume :    437/49    veh/TimePeriod   *
Heavy truck volume  :    758/84    veh/TimePeriod   *
Posted speed limit  :     60 km/h
Road gradient       :      0 %
Road pavement      :      1 (Typical asphalt or concrete)
```

\* Refers to calculated road volumes based on the following input:

```
24 hr Traffic Volume (AADT or SADT): 32400
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 1.50
Heavy Truck % of Total Volume        : 2.60
Day (16 hrs) % of Total Volume       : 90.00
```

Data for Segment # 1: Hwy 50 (day/night)

```
-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth          :      0      (No woods.)
No of house rows   :      0 / 0
Surface            :      2      (Reflective ground surface)
Receiver source distance : 65.30 / 65.30 m
Receiver height    : 10.50 / 10.50 m
Topography         :      1      (Flat/gentle slope; no barrier)
Reference angle    :      0.00
```

Results segment # 1: Hwy 50 (day)

Source height = 1.27 m

ROAD (0.00 + 64.41 + 0.00) = 64.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	70.80	0.00	-6.39	0.00	0.00	0.00	0.00	64.41

Segment Leq : 64.41 dBA

Total Leq All Segments: 64.41 dBA

Results segment # 1: Hwy 50 (night)

-----  
Source height = 1.27 m

ROAD (0.00 + 57.87 + 0.00) = 57.87 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	64.26	0.00	-6.39	0.00	0.00	0.00	0.00	57.87

-----

Segment Leq : 57.87 dBA

Total Leq All Segments: 57.87 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.41 dBA  
(NIGHT): 57.87 dBA



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