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Noise Feasibility Study
Proposed Residential Development
6620 Rothschild Trail
Mississauga, Ontario

Prepared for:

1215846 Ontario Ltd (DiBlasio Homes)
6620 Rothschild Trail
Mississauga, ON L5W 0A6

Prepared by

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1 Introduction

HGC Engineering was retained by 1215846 Ontario Ltd (DiBlasio Homes) to conduct a noise feasibility study for a proposed residential development to be located east of Mavis Road, west of McLaughlin Road and north of Courtney Park Drive in Mississauga Ontario. The development will include one 4-storey condominium apartment building with 1 level of underground parking. The study is required by the City of Mississauga as part of the planning and approvals process.

Traffic noise on Mavis Road and McLaughlin Road and air traffic noise from the Lester B. Pearson International Airport were confirmed to be the main noise sources. Road traffic data for the roadways was obtained from the Region of Peel. Road traffic noise levels were predicted at the location of the proposed building facades. These data were used to predict and assess the future sound levels impacting the proposed residences with respect to Ministry of the Environment, Conservation and Parks (MECP) guidelines.

The results of this study indicate that with suitable noise control measures integrated into the design of the building, it is feasible to achieve the indoor MECP guidelines sound levels from road and air traffic. Since the site is located between Noise Exposure Forecast (NEF) 30 and 35 (approximately at NEF 32), central air conditioning is required for the residential building. Upgraded building constructions (windows, doors, walls and ceiling/roof constructions) are also required for the proposed building. Associated acoustical requirements are specified in this report. Warning clauses are recommended to inform future residents of the road and air traffic noise impacts.

An analysis was also conducted to determine the potential impact of noise from the rooftop HVAC equipment on the existing neighbouring sensitive receptors, which are 2-storey residences. The results indicate that the sound emissions of the residential building will be below the MECP minimum exclusionary sound level limits.

2 Site Description and Noise Sources

The proposed residential development is situated east of Mavis Road, west of McLaughlin Road and north of Courtney Park Drive in Mississauga, Ontario, as shown in Figure 1. The site plan prepared by pml.A dated June 19, 2020 is provided as Figure 2. The proposed development will consist of a 4-storey apartment building with one level of underground parking. Appendix A includes preliminary floor plans and building elevations.

HGC Engineering personnel visited the site to observe the acoustic environment near the proposed site and to identify the significant noise sources in the vicinity. The acoustical environment surrounding the site is urban in nature. Existing residential uses surround the proposed development to the north, south and east. To the west of the site are parklands. An existing single-detached house located on site will be removed.

2.1 Noise Sources

The dominant noise sources that will impact the proposed development are road traffic on Mavis Road and McLaughlin Road and air traffic from Lester B. Pearson International Airport. The subject site is located near Pearson International Airport, and lies between the 30 and 35 (approximately at NEF 32) Noise Exposure Forecast/Noise Exposure Projection (NEF/NEP) contour (see Figure 3). Air traffic is also considered in the following analysis. There were no other major sources of significant noise evident within 500 metres of the site.

Two makeup air units will be located on the rooftop to provide fresh air to corridors. A noise assessment of the rooftop units at surrounding residences is provided in Section 5.

3 Sound Level Criteria

3.1 Road Traffic Noise

Guidelines for acceptable levels of road noise impacting residential developments are given in the MECP publication NPC-300, “Environmental Noise Guidelines – Stationary and Transportation Sources – Approval and Planning”, Part C release date October 21, 2013 and are listed in Table I below. The values in Table I are energy equivalent (average) sound levels [L_{EQ}] in units of A

weighted decibels [dBA].

Table I: Road Traffic Noise Criteria

Area	Daytime L_{EQ} (16 hour) Road	Night-time L_{EQ} (8 hour) Road
Outdoor Living Area	55 dBA	--
Inside Living/Dining Room	45 dBA	45 dBA
Inside Bedroom	45 dBA	40 dBA

The MECP defines daytime hours as the period between 07:00 and 23:00, and nighttime hours between 23:00 and 07:00. The term "Outdoor Living Area" (OLA) is used in reference to an outdoor patio, backyard, terrace, children's playground or other area where passive recreation is expected to occur.

The MECP guidelines allow the daytime sound levels in 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.

A central air conditioning system as an alternative means of ventilation to open windows is required for dwellings where nighttime sound levels outside bedroom windows exceed 60 dBA, or where the daytime sound levels outside living/dining room windows exceeds 65 dBA. Forced-air ventilation with ducts sized to accommodate the future installation of central air conditioning is required when nighttime noise levels at bedroom or living/dining room windows are in the range of 51 to 60 dBA, or where the daytime sound levels outside bedrooms or 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 noise excesses are also required when nighttime sound levels exceed 50 dBA at the plane of the bedroom or living/dining room window and daytime sound levels exceed 55 dBA in the outdoor living area and at the plane of the bedroom or living/dining room window due to road traffic.

3.2 Air Traffic Noise

Indoor sound limits due to air traffic are also defined in the MECP in publication NPC -300. The maximum allowable Noise Exposure Forecast (NEF) limits are summarized in Table II.

Table II: Air Traffic Noise Criterion

Area	Indoor NEF/NEP
Living/Dining Room (indoor)	5
Bedroom (indoor)	0

The living/dining rooms, dens and bedrooms of the proposed dwelling units are the sensitive receptor locations. Typically, washrooms and kitchens are considered noise insensitive areas. There are no outdoor noise criteria for aircraft noise because there is no effective means of mitigation.

The guidelines indicate that warning clauses and mandatory central air conditioning is required for any dwellings located above NEF/NEP contours of 30. In addition, building components including windows, doors, walls and ceiling/roof must be designed to achieve the indoor sound level criteria.

3.3 Stationary Noise

In Ontario, the guidelines of the Ontario MECP form the basis of environmental noise assessment. MECP publication NPC-300, *Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning",* release date October 21, 2013 provides criteria for assessing the noise impact of the rooftop equipment associated with the proposed school. The term Stationary Source is used to describe all noise sources at the site including mechanical equipment, conveyances, such as trucks when they are moving within the site boundaries. The MECP guidelines assess the noise impact of fluctuating sounds on an hourly energy equivalent (average) sound level basis, rather than on short-duration maximum sound levels. Hourly equivalent sound levels are denoted as the $L_{EQ\text{-}1hr}$.

The criteria are based on the background sound level at sensitive points of reception (which are typically residences) in the quietest hour that the source can be in operation. Background sound includes sound from road traffic and natural sounds, but excludes the sources under assessment. For relatively quiet areas where background sound may fall to low levels during some hours, NPC-300 stipulates various minimum limits. In Class 1 areas, these limits are 50 dBA for daytime (07:00 to 23:00) and 45 dBA at night (23:00 to 07:00).

The MECP guidelines stipulate that the sound level impact during a "predicable worst case hour" be considered. This is defined to be an hour when a typically busy "planned and predictable mode of operation" occurs at the subject facility coincident with a period of minimal background sound.

The likely activities at the proposed development may include the occasional movement of vehicles on the property, the infrequent deliveries, garbage collection and are not of themselves considered to be significant noise sources in the MECP guidelines.

4 Traffic Noise Assessment

4.1 Road Traffic Data

Traffic data for Mavis Road and McLaughlin Road was obtained from the City of Mississauga in the form of ultimate Annual Average Daily Traffic (AADT) data and is provided in Appendix B. Commercial percentages as indicated on the traffic data was used. A day night split of 90%/10% was used in the analysis along with a posted speed limit of 70 kph for both roadways. Table III summarizes the traffic volume data used in this study.

Table III: Ultimate Road Traffic Data

Road Name		Cars	Medium Trucks	Heavy Trucks	Total
Mavis Road	Daytime	44 550	2 723	2 228	49 500
	Nighttime	4 950	303	248	5 500
	Total	**49 500**	**3 025**	**2 475**	**55 000**
McLaughlin Road	Daytime	33 611	572	468	34 650
	Nighttime	3 735	64	52	3 850
	Total	**37 345**	**635**	**520**	**38 500**

4.2 Road Traffic Noise Predictions

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

Prediction locations were chosen around the residential site to obtain a good representation of the future sound levels at the dwelling units with exposure to the roadways. Sound levels were predicted at the plane of the top storey bedroom and/or living/dining room windows during daytime and nighttime hours to investigate ventilation requirements. The results of these predictions are summarized in Table IV. The distance setback of the building indicated on the site plan was used in the analysis, along with an aerial photo to determine the distance to the major roadway. The acoustic requirements may be subject to modifications if the site plan is changed significantly.

Table IV: Predicted Traffic Sound Levels, [dBA]

Prediction Location	Description	Daytime – at Façade $L_{EQ(16)}$	Nighttime - at Façade $L_{EQ(8)}$
[A]	West Façade	55	<50
[B]	South Façade	56	<50
[C]	East Façade	<55	<50
[D]	North Façade	<55	<50
[E]	OLA	<55	--

4.3 Air Traffic

The 2005 Composite Noise Contour Map for the Lester B. Pearson International Airport was obtained. This Map indicated that the proposed site is located between the 30 and 35 NEF/NEP contour, approximately at NEF 32, as shown on Figure 3.

The NEF contour map was used to determine the Acoustical Insulation Factors (AIF) required for the building components for the proposed building. The MECP indoor noise criteria for aircraft traffic noise was used as a guideline.

4.4 Discussion and Recommendations

The results indicate that road traffic sound levels will meet MECP plane-of-window criteria at most of the building facades. Recommendations for ventilation and building façade constructions are provided due to air traffic noise.

4.4.1 Outdoor Living Areas

The dwelling units in the building will have balconies that are less than 4 m in depth. These balconies are not considered to be outdoor living areas under MECP guidelines, and therefore are exempt from traffic noise assessment.

There is a common amenity space located at grade, to the west of the building. The predicted sound level is less than 55 dBA. Physical mitigation is not required.

4.4.2 Indoor Living Areas and Ventilation Requirements

Inclusion of Central Air Conditioning

The building is located between the 30 to 35 NEF contours for Lester B. Pearson International Airport, as such, central air conditioning is required for all the residential units or the entire building so that windows may remain closed. The guidelines also recommend warning clauses for the building. Window or through-the-wall air conditioning units, similar to motel-style 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, unless they are housed in their own closet with an access door for maintenance. 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.

4.4.3 Minimum Building Facade Constructions

Since the building is located between the 30 and 35 NEF/NEP contours for the Lester B. Pearson International Airport, air traffic noise must be considered in the building designs. The site is located at approximately NEF 32.

MECP guidelines recommend that building components including windows, walls, ceilings and roofs, where applicable, must be designed so that the indoor sound levels comply with MECP noise criteria. The acoustical performance of the building components (windows, doors, and walls) must also be specified.

The acoustic insulation factors (AIF) required for road traffic and air traffic must be combined to obtain an overall AIF for the building. The required building components are selected based on the overall AIF value.

To do so, calculations were performed to determine the acoustical insulation factors to maintain indoor sound levels within MECP guidelines. The calculation methods were developed by the National Research Council (NRC). They are based on the predicted future sound levels at the

building facades, and the area ratios of the facade components (walls, windows, ceiling/roof and doors) and the floor area of the adjacent room.

Exterior Wall Constructions

It is recommended that all exterior walls of the building be of brick or masonry construction, which would provide sufficient acoustical insulation for the interior spaces. As noted on the elevation drawings, the exterior façades of the building are proposed to be a combination of brick and masonry.

Exterior Doors

There are glazed exterior doors (sliding or swing) for entry onto the balconies from living/dining rooms or bedrooms. All exterior doors should be composed of steel with a total thickness of at least 45 mm with foam or glass fibre insulation provided with integral frames and magnetic weather-stripping. Patio doors would be considered as contributing to the total window area provided below.

Ceiling/Roof System

A typical ceiling/roof construction consisting of a concrete slab, rigid insulation and built up roofing would be required to provide adequate sound insulation for the upper floor units.

Acoustical Requirements for Glazing

The building envelope constructions of the dwelling units must be able to have an Acoustic Insulation Factor (AIF) of at least 27 for the living/dining/family rooms and AIF of 32 for the bedrooms to comply with MECP indoor sound level requirements.

Preliminary floor plans and building elevations prepared by pml.A dated November 6, 2018 were reviewed to determine acoustical requirements for glazing. In general, the living rooms have window to floor area ratios of up to 25% and bedrooms have window to floor area ratios of up to 40%. The minimum glazing for the development must achieve a sound transmission class (STC) rating of at least 34 for bedrooms and STC of at least 30 for living/dining rooms in order to achieve the target indoor sound level criteria due to road and air traffic. Awning windows, and swing or sliding doors

to balconies should have tight seals sufficient to achieve similar acoustical performance ratings. Acoustical criteria for different façades can be optimized as part of the detail design of the building envelope.

Sample window assemblies which may achieve the STC requirements are summarized in Table V below. Note that acoustic performance varies with manufacturer's construction details, and these are only guidelines to provide some indication of the type of glazing likely to be required. Acoustical test data for the selected assemblies should be requested from the supplier, to ensure that the stated acoustic performance levels will be achieved by their assemblies.

Table V: Glazing Constructions Satisfying STC Requirements

STC Requirement	Sample Glazing Configuration (STC)
28 – 29	Any double glazed unit
30 – 31	3(13)3
32 – 33	4(10)4
34	4(19)4

In Table V, the numbers outside the parentheses indicate minimum pane thicknesses in millimetres and the number in parentheses indicates the minimum inter-pane gap in millimetres.

When detailed building plans are available, an acoustical consultant shall review them to ensure that the windows and building constructions are adequately designed to ensure acceptable indoor noise levels.

4.4.4 Warning Clauses

The MECP guidelines recommend that appropriate warning clauses be used in the Development Agreements and in purchase, sale and lease agreements (typically by reference to the Development Agreements), to inform future owners and occupants about noise concerns from transportation sources in the area. The following clauses are recommended.

(a) 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 and air traffic may occasionally interfere with some activities of the dwelling unit occupants as the sound levels exceed the Municipality's and the Ministry of the Environment, Conservation and Parks noise criteria.

(b) This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the Municipality's and the Ministry of the Environment, Conservation and Parks noise criteria.

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

5 Impact of the Development on the Environment

5.1 Sound Level Limits at Neighbouring Receptors

It is expected that any increase in local traffic associated with the development will not be substantial enough to affect noise levels significantly.

MECP Publication NPC-300 stipulate sound level limits for new stationary (non-traffic) sources of noise. The sound level limit for a stationary source which operates in a Class 1 urban environment is related to the minimum one-hour L_{EQ} ambient (background) sound level, at any potentially impacted residential point of reception.

Existing and future residences surrounding the subject site (R1-R3) were considered to be the representative receptors in this assessment. R1 to R3 are 2-storey residences. Receptor locations are shown on Figure 4. The exclusionary minimum limits of 50 dBA during the day and 45 dBA at night applies to all receptors

5.2 Stationary Noise Assessment

A roof plan showing the locations of the equipment is attached in Appendix A. Sound emission data for the proposed rooftop equipment was obtained from the manufacturer.

The following information and assumptions were used in the analysis.

- Building height is 13.6 m;
- Two (2) makeup air units with a height of 1.5 m are located on the rooftop as shown on roof plan and Figure 4 with a sound power level of 90 dBA;

In accordance with establishing the predictable worst-case conditions, the rooftop HVAC equipment was assumed to operate at 90% capacity during daytime/evening/nighttime hours to account for on/off cycles.

Commercial activities such as the occasional movement of vehicles on the property, the infrequent delivery of goods and garbage collection are not of themselves considered to be significant noise sources in the MECP guidelines.

The sound levels were used as input to a predictive computer model. The calculations consider the acoustical effects of distance and shielding by the building itself. The unmitigated sound levels due to the rooftop mechanical equipment at the closest neighbouring residences are summarized in the following table. Sound level results are also shown in Figure 4.

Table VI: Predicted Sound Levels at Residential Receptors [dBA], Without Mitigation

Receptor	Criteria Day / Night	Predicted Daytime/Nighttime – at Façade
R1 (2-storey house to the west)	50 / 45	40
R2 (2-storey house to the North)	50 / 45	38
R3 (2-storey house to the East)	50 / 45	<35

The results from the stationary source noise assessment indicate that noise from rooftop mechanical equipment associated with the proposed building are expected to meet the applicable MECP sound level limits at neighbouring residences.

6 Summary of Recommendations

The following list and table summarizes the recommendations made in this report.

1. Central air conditioning systems are recommended for all residential units of the entire building. It is understood that all units will likely be provided with an individual heating and cooling system housed in its own insulated closet.
2. Certain minimum building and glazing constructions are recommended, as indicated in Section 4.4.3. Acoustical criteria for different façades can be optimized as part of the detail design of the building envelope.
3. Warning clauses should be used to inform future residents of the road traffic and air traffic noise issues.

Table VII: Summary of Noise Control Requirements and Noise Warning Clauses

Units	Acoustic Barrier	Ventilation Requirements *	Type of Warning Clause	Building Façade Constructions (AIF requirements)**
All	--	Central A/C	a, b	LR/DR: AIF-27 BR: AIF-32

Notes:
* The location, installation and sound rating of the air conditioning condensers must be compliant with MECP Guideline NPC-300
** Refer to Section 5.3 for details
OBC – meeting the minimum requirements of the Ontario Building Code.

6.1 Implementation

To ensure that the noise control recommendations outlined above are fully implemented, it is recommended that:

1) Prior to an application for a building permit, a Professional Engineer qualified to provide acoustical engineering services in the Province of Ontario shall review the building plans to ensure that the windows and building constructions (exterior walls and roof/ceiling systems) are adequately designed to ensure acceptable indoor noise levels.

2) Prior to the issuance of occupancy permits for this development, the Municipality's building inspector or a Professional Engineer qualified to perform acoustical engineer services in the Province of Ontario should certify that the noise control measures have been properly incorporated, installed and constructed.

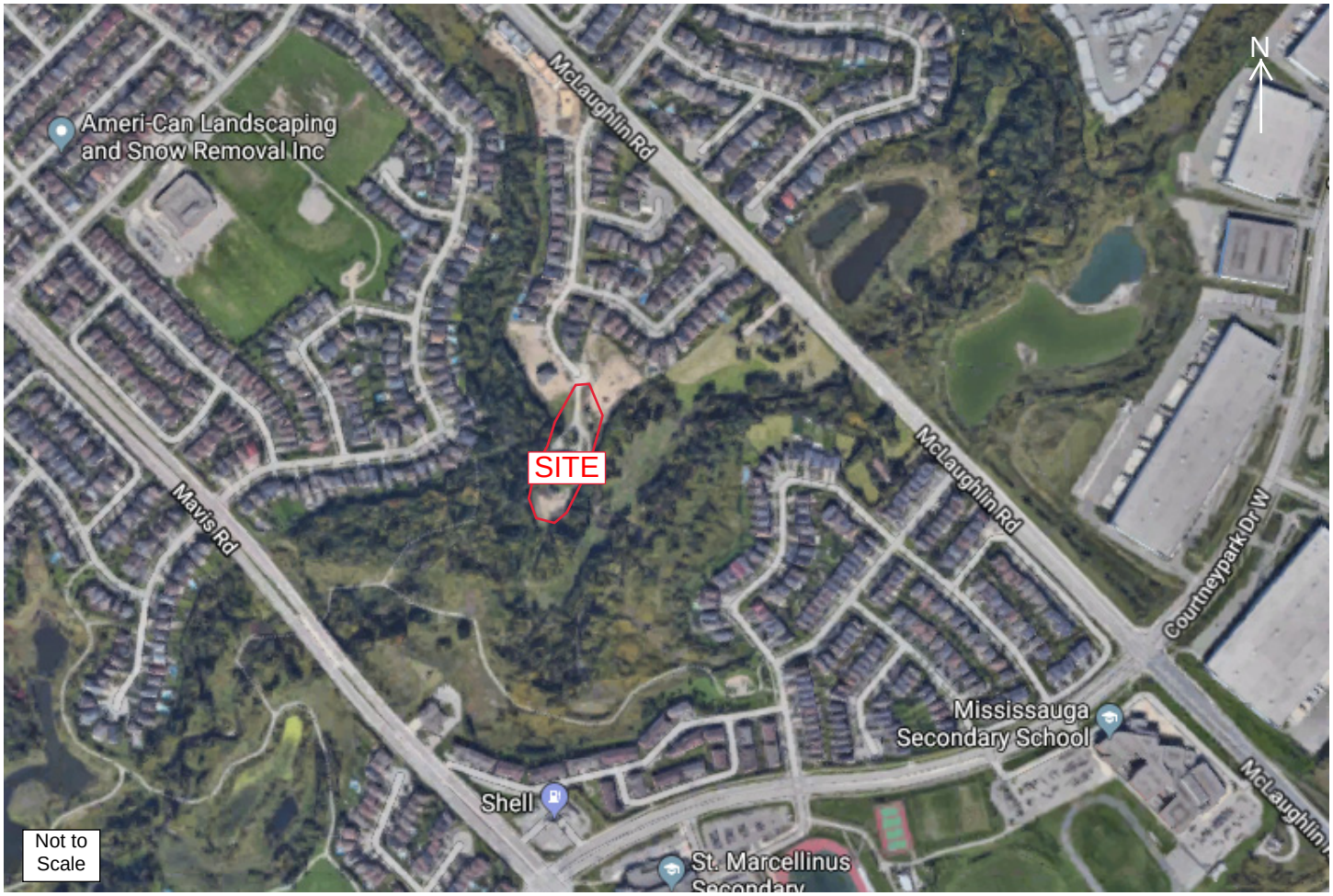
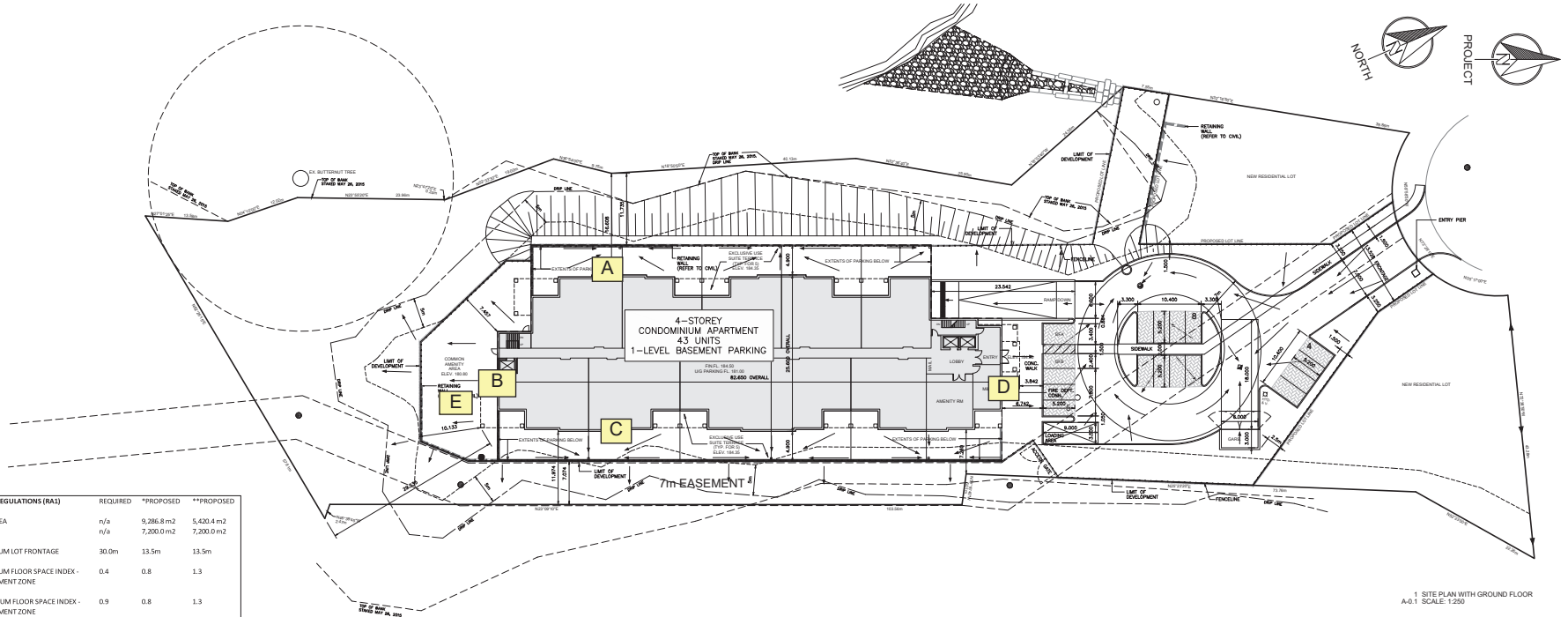


Figure 1: Aerial Photo



1 SITE PLAN WITH GROUND FLOOR
A-0.1 SCALE: 1:250

ZONE REGULATIONS (RA1)	REQUIRED	*PROPOSED	**PROPOSED
LOT AREA	n/a	9,286.8 m2	5,420.4 m2
GFA	n/a	7,200.0 m2	7,200.0 m2
MINIMUM LOT FRONTAGE	30.0m	13.5m	13.5m
MINIMUM FLOOR SPACE INDEX - APARTMENT ZONE	0.4	0.8	1.3
MAXIMUM FLOOR SPACE INDEX - APARTMENT ZONE	0.9	0.8	1.3
MAXIMUM HEIGHT	13.0m	13.6m	13.6m
MINIMUM FRONT AND EXTERIOR SIDE YARDS	7.5m	+50.0m	+50.0m
MINIMUM INTERIOR SIDE YARD	4.5m	7.0m	4.9m
Where an interior lot line, or any portion thereof, abuts a zone permitting detached and/or semi-detached	4.5m	n/a	n/a
MINIMUM REAR YARD	7.5m	29.5m	7.4m
PARKING, LOADING, SERVICING AREA AND PARKING STRUCTURES			
Minimum setback from surface parking spaces or aisles to any other lot line	3.0m	1.5m	1.5m
Minimum setback from a parking structure completely below finished grade, inclusive of external access stairwells, to any lot line	3.0m	2.0m	0.0m
Minimum setback from a waste enclosure/loading area to a zone permitting detached and/or semi-detached	3.0m	2.5m	2.5m
MINIMUM LANDSCAPED AREA, LANDSCAPED BUFFER AND AMENITY AREA			
Minimum landscaped area	40%	65%	40%
Minimum depth of a landscaped buffer abutting a lot line that is a street line and/or abutting lands with an Open Space, Greenlands and/or a Residential Zone with the exception of an Apartment Zone	4.5m	8.4m	4.0m
Minimum depth of a landscaped buffer along any other lot line	3.0m	1.5m	1.5m
Minimum amenity area	10%	10% (930 m2)	10% (542 m2)
Minimum percentage of total required amenity area to be provided in one contiguous area	50%	52% (485 m2)	179% (485 m2)
Minimum amenity area to be provided outside at grade	55.0 m2	485.0 m2	485.0 m2

*ZONE REGULATIONS BASED ON TOTAL LOT AREA

**ZONE REGULATIONS BASED ON DEVELOPABLE LOT AREA

General Note:
i. I hereby certify that this drawing confirms in all respects to the site development plans Architect or Engineer s Signature (if applicable) and Professional seal
ii. The City of Mississauga requires that all working drawings submitted to the Building Division as part of an application for the issuance of a building permit shall be certified by the architect or engineer as being in conformity with the site development plan as approved by the City of Mississauga.
iii. All exterior lighting will be directed onto the site and will not infringe upon the adjacent properties.
iv. All rooftop mechanical units shall be screened from view by the applicant.
v. Parking spaces reserved for people with disabilities must be identified by a sign, installed at the applicant s expense, in accordance with the By-law Requirements and Building Code Requirements.
vi. The applicant will be responsible for ensuring that all plans confirm to Transport Canada s restrictions.
vii. Grades will be met with a 33% maximum slope at the property lines and within the site.
viii. All damaged areas are to be reinstated with topsoil and sod prior to the release of securities.
ix. Signage shown on the site development plans is for information purposes only. All signs will be subject to the provisions of Sign by-law 0054-2002, as amended, and a separate sign application will be required through the Building Division.
x. Any fencing adjacent to municipal lands is to be located 15 cm (6.0 in.) inside the property line.
xi. Only shielded lighting fixtures are permitted for all development, except for detached and semi-detached dwellings within 60 m (196.8 ft.) of a residentially zoned property and must confirm to the Engineer Certified Lighting Plan.
xii. The Engineer Certified Lighting Plan must be signed by the consulting Engineer.
xiii. The Owner covenants and agrees to construct and install shielded lighting fixtures on the subject lands, in conformity with the Site Plan and Engineer Certified Lighting Plan to the satisfaction of the City of Mississauga.
xiv. The applicant will be responsible for ensuring that all plans confirm to Transport Canada s restrictions.
xv. Where planting is to be located in landscaped areas on top of an underground parking structure, it is the responsibility of the applicant to arrange the coordination of the design of the underground parking structure with the Landscape Architect and the Consulting Engineering. Underground parking structures with landscaping area to be capable of supporting the following loads:
– 15 cm of drainage gravel plus 40 cm topsoil for sod
– 15 cm of drainage gravel plus 60 cm topsoil for shrubs
– 15 cm of drainage gravel plus 90 cm for trees
Or
– Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 40 cm topsoil for sod
– Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 60 cm topsoil for shrubs
– Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 90 cm topsoil for trees
* Terradrain 900 or approved equal
xvi. The structural design of any retaining wall over 0.6 m in height or any retaining wall located on a property line is to be shown on the Site Grading plan for this project and is to be approved by the Consulting Engineer for the project.
xvii. Continuous 15 cm high barrier type poured concrete curbing will be provided between all asphalt and landscaped areas throughout the site.
xviii. All utility companies will be notified for locates prior to the installation of the hoarding that lies within the site and within the limited of the City boulevard area.

FLOOR AREAS			
4th FLOOR	11 UNITS	1,800 SQM	19,375 SF
3rd FLOOR	11 UNITS	1,800 SQM	19,375 SF
2nd FLOOR	11 UNITS	1,800 SQM	19,375 SF
1st FLOOR	10 UNITS	1,800 SQM	19,375 SF
TOTAL	43 UNITS	7,200 SQM	77,500 SF
BASEMENT		2,710 SQM	29,170 SF

PARKING
43 UNITS @ 2.00 = 86 SPACES (86 RESIDENT PROVIDED)
43 UNITS @ 0.20 = 9 SPACES (18 VISITOR PROVIDED)

Sign Note:
Signs are approved under a separate permit process. Sign information shown is for information purposes only.

Tree Protection Note:
The applicant is responsible for ensuring that tree protection hoarding is maintained throughout all phases of demolition and construction in the location and condition as approved by the Planning and Building Department. No materials (building materials, soil, etc.) may be stockpiled within the area of hoarding. Failure to maintain the hoarding as originally approved or the storage of materials within the hoarding will be cause for the Letter of Credit to be held for two years following completion of all site works. Hoarding must be inspected prior to the removal of any tree hoarding from the site.

Owner s Signature: _____

Date: _____

Standard Signed Condominium Declaration for Multiple Family Residential Developments:

I hereby certify that the Landscape Plan conforms to the Site Grading and Drainage Plan for this application.

As follows:

DOMINION OF CANADA) IN THE MATTER OF A
PROVINCE OF ONTARIO) MULTIPLE RESIDENTIAL
) BUILDING DEVELOPMENT

REGIONAL MUNICIPALITY) ON THE PROPERTY LOCATED IN
OF PEEL) THE CITY OF MISSISSAUGA
) BEING KNOWN AS
TO WIT:) _____
) _____
) _____
) _____

I, _____

MAKE OATH AND SAY AS FOLLOWS:

1. I AM THE PRESIDENT OF _____
WHICH IS THE OWNER AND BUILDER OF MULTI RESIDNIAL BUILDING(S) ON THE PROPERTY DESCRIBED ABOVE.

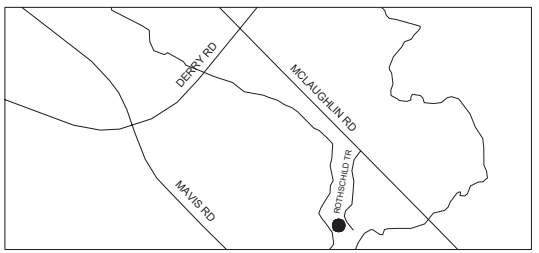
2. THAT THE SAID MULTI RESIDENTIAL BUILDING(S) IS BEING BUILT TO BE SOLD / RENTED AS CONDONIUM / RENTAL TOWNHOUSES / APARTMENTS (AS APPLICABLE), AND I MAKE THIS SOLEMN DECLARATION CONSCIENTIOUSLY BELIEVING IT TO BE TRUE AND KNOWING THAT IT IS ON THE SAME FORCE AND EFFECT AS IF I MAKE IT UNDER OATH.

DECLARED BEFORE ME AT THE) _____
_____) _____
IN THE MUNICIPALITY OF) _____
_____) _____
THIS_____, DAY OF _____) _____
20_____.) _____

A COMMISSIONER ETC. _____

Owner's Note:
We agree to implement the approved Site and Landscape Plans within 18 months after the execution of the Site Plan Undertaking and will retain the Landscape Architect to make periodic site inspections. Upon completion of the works we will forward to the City of Mississauga a copy of the Completion Notification Certificate from the Landscape Architect and the applicable inspection fee.
The Landscape Architect or Consulting Engineer will provide certification to indicate that:
– the recommendations outlined in the Acoustic Vibration Study have been implemented in accordance with the study;
– the Engineering Certificate lighting Plan and the LID techniques for this project have been install in accordance with the approved plans
Any revision to the Site Plan, Landscape Plans and Engineer Certified Lighting Plan (if applicable) will be submitted to the Planning and Building Department, Development and Design Division, City of Mississauga for review and approval, prior to the commencement of the works.
We hereby authorize the City, it's authorized agents, servants or employees to enter upon our land to carry out inspections from time to time and agree to indemnify the City and its authorized agents and save them harmless from any and all actions arising out of the exercise by the City, its authorized agents, servants or employees of the rights hereby given to them. We undertake to notify the City forthwith of any change of ownership of the said lands.

Signature of Owner: _____
Name of Owner: _____
Address: _____
Date: _____



pml.A

patrick markus luckie, Architect

ONTARIO ASSOCIATION OF ARCHITECTS
PATRICK MARKUS LUCKIE
LICENCE

VINTAGES CONDO

SITE PLAN
SCALE 1:250

SP File No.:

PROJECT No.: 16-23

A-0.1

Figure 2: Site plan Showing Prediction Locations

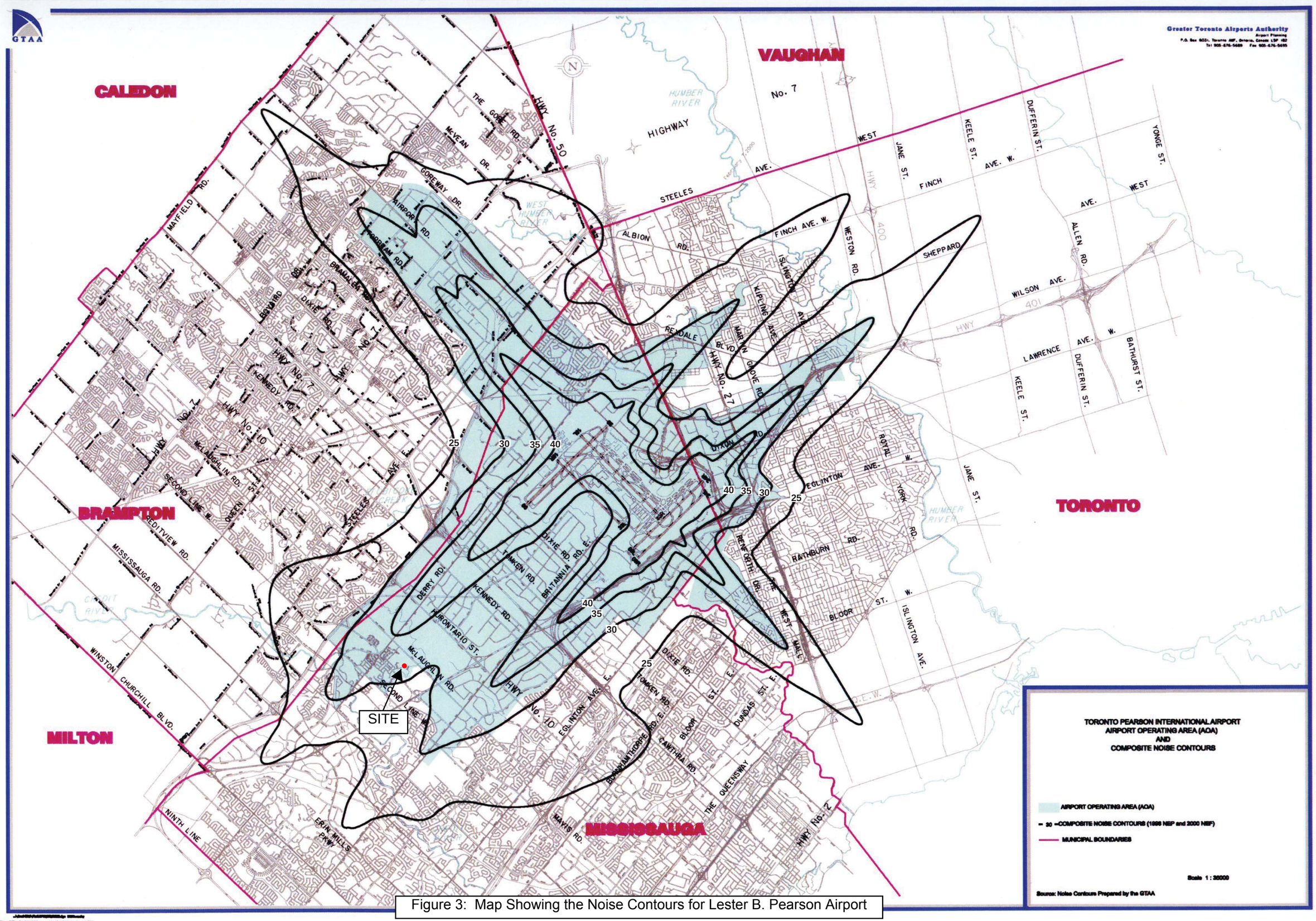


Figure 3: Map Showing the Noise Contours for Lester B. Pearson Airport

Figure 4: Predicted Stationary Source Sound Level Contours, Leq1hr [dBA]

APPENDIX A
SUPPORTING DRAWINGS

1 EAST ELEVATION
A-2.1 SCALE: 1:125

2 NORTH (ENTRANCE) ELEVATION
A-2.1 SCALE: 1:125

3 SOUTH (REAR) ELEVATION
A-2.1 SCALE: 1:125

4 WEST ELEVATION
A-2.1 SCALE: 1:125

pml.A

patrick markus luckie, Architect
7283 BENDIGO CIRCLE – MISSISSAUGA, ON – L5N 1Z4 – TEL: 416 885 0108

Revisions:

Date:	Particular:
FEB.03.20	UPDATED PERIMETER GRADING
APR.13.20	LOWERED AMENITY TERRACE
APR.24.20	LOWER REAR AMENITY, ADD REAR BALCONIES

Issue:

Date:	Particular:
NOV.16.18	ISSUED FOR REVIEW
JUN.19.20	ISSUED FOR SITE PLAN APPLICATION

ONTARIO ASSOCIATION OF ARCHITECTS
PATRICK MARKUS LUCKIE
LICENCE
6742

VINTAGES CONDO
RESIDENTIAL APARTMENT

6620 ROTHSCHILD TRAIL, MISSISSAUGA
LOT 21, 22 REG. PLAN 43M-1710

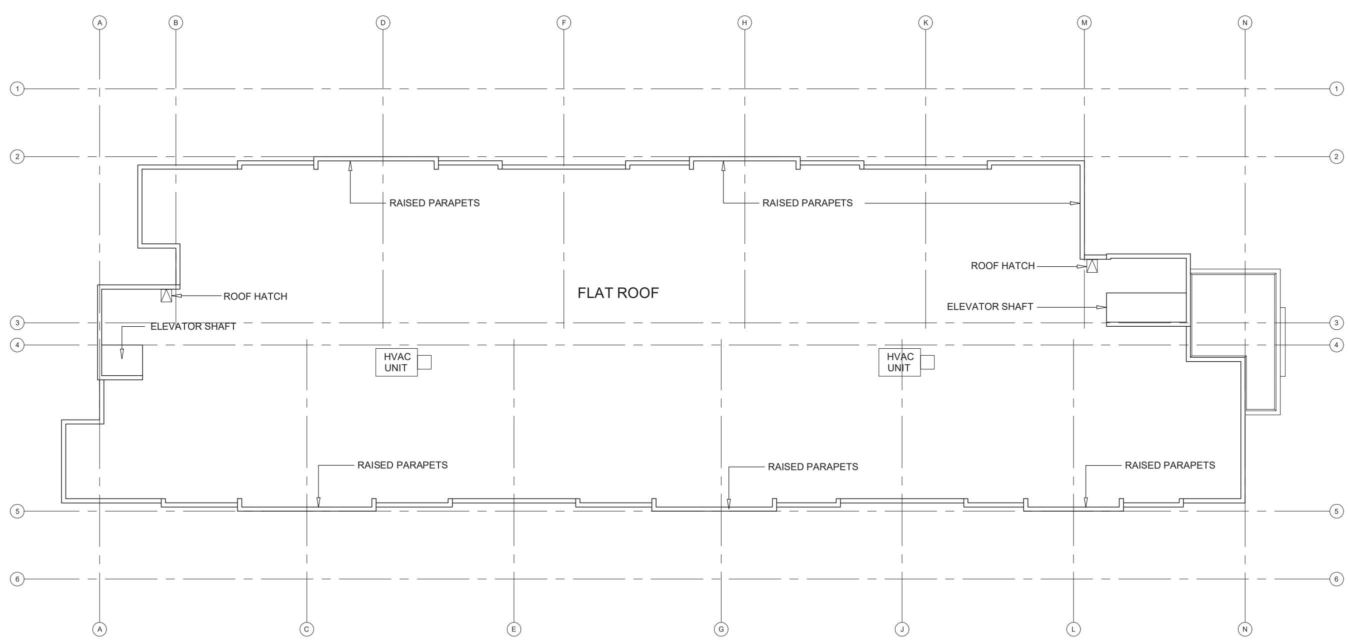
DI BLASIO HOMES
6620 ROTHSCHILD TRAIL
MISSISSAUGA, ON L5W 0A6
TEL:(905)890-2263

ELEVATIONS
SCALE 1:125

SP File No.:
PROJECT No.: 16-23

A-2.1

1 4th FLOOR PLAN
A-1.3 SCALE: 1:125



2 ROOF PLAN
A-1.3 SCALE: 1:125

pml.A

patrick markus luckie, Architect
7283 BENDIGO CIRCLE – MISSISSAUGA, ON – L5N 1Z4 – TEL: 416 885 0108

Revisions:

Date:	Particular:
APR.24.20	LOWER REAR AMENITY, ADD REAR BALCONIES

Issue:

Date:	Particular:
NOV.16.18	ISSUED FOR REVIEW
JUN.19.20	ISSUED FOR SITE PLAN APPLICATION

ONTARIO ASSOCIATION OF ARCHITECTS
PATRICK MARKUS LUCKIE
LICENCE
6742

VINTAGES CONDO
RESIDENTIAL APARTMENT

6620 ROTHSCHILD TRAIL, MISSISSAUGA
LOT 21, 22 REG. PLAN 43M-1710

DI BLASIO HOMES
6620 ROTHSCHILD TRAIL
MISSISSAUGA, ON L5W 0A6
TEL:(905)890-2263

FLOOR PLANS
SCALE 1:125

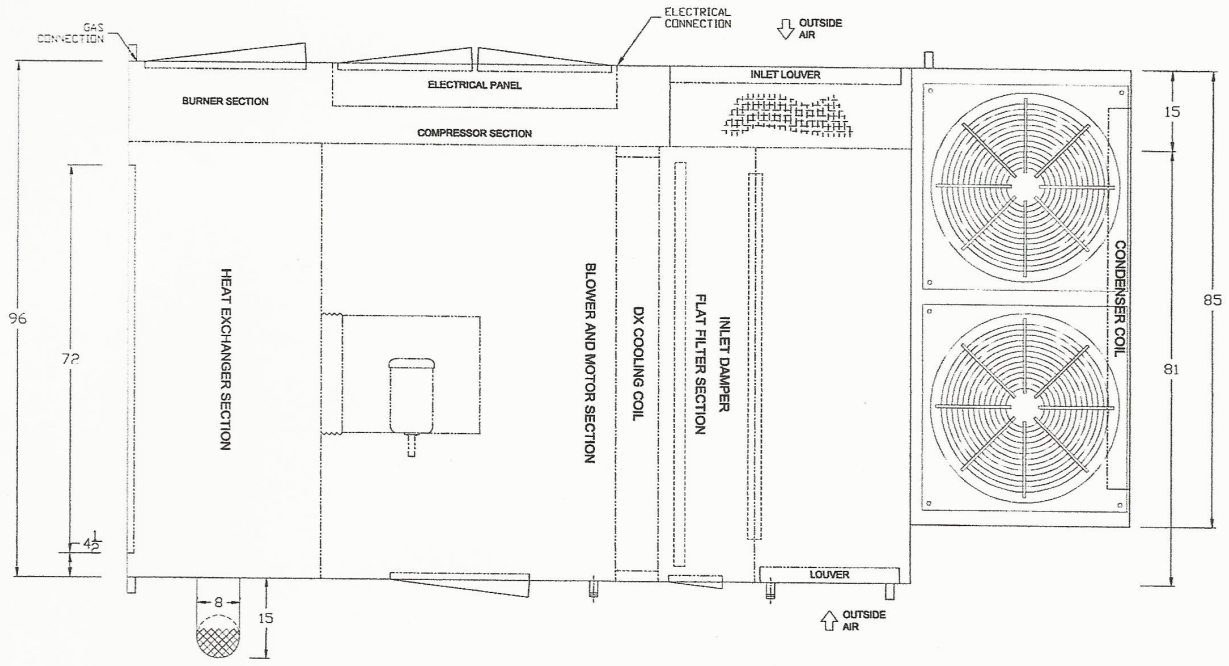
SP File No.:

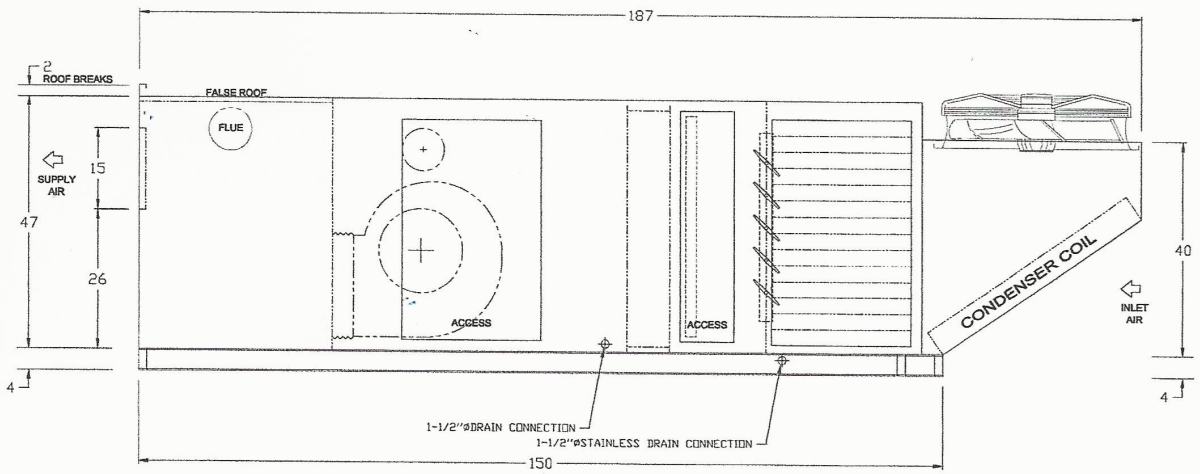
PROJECT No.: 16-23

A-1.3

TORONTO SALES

DRAWING SUBJECT TO CHANGE





ESTIMATED Total unit Weight = 4,432 lbs (SUBJECT TO CHANGE)

ProUnit

DOOR SIZES AND INTERNAL COMPONENTS ARE APPROX. VALUES. DIMENSIONS SHOWN IN INCHES ONLY UNLESS OTHERWISE NOTED.

FWE113/DJS100

TAG: CORRIDOR CONDO

PRELIMINARY DRAWING ONLY - NOT FOR CONSTRUCTION.

EngA® ENGINEERED AIR®

REVISIONS:			
DATE: FEB 04 2016	DRWN BY: SQ	CHKD BY: -	DRWG NO.:

APPENDIX B
ROAD TRAFFIC DATA

Date:	21-Dec-18

NOISE REPORT FOR PROPOSED DEVELOPMENT

REQUESTED BY:

Name:	Mandy Chan
Company	HGC Engineering

PREPARED BY:

Name:	Loudel Uy
Tel#:	(905) 615-3200

Location:	- McLaughlin Road between Courtneypark Dr to Derry Rd - Mavis Road between Courtneypark Dr to Derry Rd
Look Up ID#:	396

ON SITE TRAFFIC DATA

Specific	***Street Names***				
	McLaughlin Road	Mavis Road			
AADT:	38,500	55,000			
# of Lanes:	4 lanes	6 lanes			
% Trucks:	3%	10%			
Medium/Heavy Trucks Ratio:	55/45	55/45			
Day/Night Traffic Split:	90/10	90/10			
Posted Speed Limit:	70 km/h	70 km/h			
Gradient of Road:	<2%	<2%			
Ultimate R O W:	30m	35m			

Comments:	Ultimate Traffic Data only.

APPENDIX C
SAMPLE STAMSON OUTPUT

```
STAMSON 5.0        NORMAL REPORT        Date: 13-03-2019 12:21:04
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: west.te              Time Period: Day/Night 16/8 hours
Description: Predicted daytime & nighttime sound levels at the top storey windows
at the West Façade, Prediction Location [A]

Road data, segment # 1: MavisNB (day/night)
-------------------------------------------
Car traffic volume  : 22275/2475  veh/TimePeriod
Medium truck volume :  1361/151   veh/TimePeriod
Heavy truck volume  :  1114/124   veh/TimePeriod
Posted speed limit  :    70 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: MavisNB (day/night)
-----------------------------------------
Angle1   Angle2           : -20.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 325.00 / 325.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: MavisSB (day/night)
-------------------------------------------
Car traffic volume  : 22275/2475  veh/TimePeriod  *
Medium truck volume :  1361/151   veh/TimePeriod  *
Heavy truck volume  :  1114/124   veh/TimePeriod  *
Posted speed limit  :    70 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):  27500
    Percentage of Annual Growth        :   2.50
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   5.50
    Heavy Truck  % of Total Volume     :   4.50
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: MavisSB (day/night)
-----------------------------------------
Angle1   Angle2           : -20.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 345.00 / 345.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: McLaughlin (day/night)
-----------------------------------------------
Car traffic volume  : 33611/3735  veh/TimePeriod  *
Medium truck volume :   572/64    veh/TimePeriod  *
Heavy truck volume  :   468/52    veh/TimePeriod  *
Posted speed limit  :    70 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):  38500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: McLaughlin (day/night)
--------------------------------------------
Angle1   Angle2           :  20.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 370.00 / 370.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: MavisNB (day)
----------------------------------

Source height = 1.46 m

ROAD (0.00 + 51.90 + 0.00) = 51.90 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -20     90   0.39  73.40   0.00 -18.58  -2.92   0.00   0.00   0.00  51.90
-------------------------------------------------------------------------------
Segment Leq : 51.90 dBA

Results segment # 2: MavisSB (day)
----------------------------------

Source height = 1.46 m

ROAD (0.00 + 51.54 + 0.00) = 51.54 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -20     90   0.39  73.40   0.00 -18.95  -2.92   0.00   0.00   0.00  51.54
-------------------------------------------------------------------------------

Segment Leq : 51.54 dBA
```

```
Results segment # 3: McLaughlin (day)
-------------------------------------

Source height = 1.08 m

ROAD (0.00 + 46.98 + 0.00) = 46.98 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    20     90   0.40  71.91   0.00 -19.53  -5.40   0.00   0.00   0.00  46.98
-------------------------------------------------------------------------------

Segment Leq : 46.98 dBA

Total Leq All Segments: 55.41 dBA

Results segment # 1: MavisNB (night)
-------------------------------------

Source height = 1.46 m

ROAD (0.00 + 45.37 + 0.00) = 45.37 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -20     90   0.39  66.87   0.00 -18.58  -2.92   0.00   0.00   0.00  45.37
-------------------------------------------------------------------------------

Segment Leq : 45.37 dBA

Results segment # 2: MavisSB (night)
-------------------------------------

Source height = 1.46 m

ROAD (0.00 + 45.01 + 0.00) = 45.01 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -20     90   0.39  66.87   0.00 -18.95  -2.92   0.00   0.00   0.00  45.01
-------------------------------------------------------------------------------

Segment Leq : 45.01 dBA

Results segment # 3: McLaughlin (night)
---------------------------------------

Source height = 1.08 m

ROAD (0.00 + 40.45 + 0.00) = 40.45 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    20     90   0.40  65.38   0.00 -19.53  -5.40   0.00   0.00   0.00  40.45
-------------------------------------------------------------------------------

Segment Leq : 40.45 dBA

Total Leq All Segments: 48.88 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.41
                           (NIGHT): 48.88
```

```
STAMSON 5.0        NORMAL REPORT        Date: 13-03-2019 12:15:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: south.te             Time Period: Day/Night 16/8 hours
Description: Predicted daytime & nighttime sound levels at the top storey windows at
the South Façade, Prediction Location [B]

Road data, segment # 1: MavisNB (day/night)
-------------------------------------------
Car traffic volume  : 22275/2475  veh/TimePeriod
Medium truck volume :  1361/151   veh/TimePeriod
Heavy truck volume  :  1114/124   veh/TimePeriod
Posted speed limit  :    70 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: MavisNB (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   40.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 315.00 / 315.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: MavisSB (day/night)
-------------------------------------------
Car traffic volume  : 22275/2475  veh/TimePeriod  *
Medium truck volume :  1361/151   veh/TimePeriod  *
Heavy truck volume  :  1114/124   veh/TimePeriod  *
Posted speed limit  :    70 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):  27500
    Percentage of Annual Growth        :   2.50
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   5.50
    Heavy Truck  % of Total Volume     :   4.50
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: MavisSB (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   40.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 335.00 / 335.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: McLaughlin (day/night)
-----------------------------------------------
Car traffic volume  : 33611/3735  veh/TimePeriod  *
Medium truck volume :   572/64    veh/TimePeriod  *
Heavy truck volume  :   468/52    veh/TimePeriod  *
Posted speed limit  :    70 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):  38500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: McLaughlin (day/night)
--------------------------------------------
Angle1   Angle2           :   0.00 deg   15.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 380.00 / 380.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: MavisNB (day)
----------------------------------

Source height = 1.46 m

ROAD (0.00 + 52.90 + 0.00) = 52.90 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     40   0.39  73.40   0.00 -18.40  -2.11   0.00   0.00   0.00  52.90
-------------------------------------------------------------------------------

Segment Leq : 52.90 dBA

Results segment # 2: MavisSB (day)
----------------------------------

Source height = 1.46 m

ROAD (0.00 + 52.53 + 0.00) = 52.53 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     40   0.39  73.40   0.00 -18.77  -2.11   0.00   0.00   0.00  52.53
-------------------------------------------------------------------------------

Segment Leq : 52.53 dBA
```

```
Results segment # 3: McLaughlin (day)
-------------------------------------

Source height = 1.08 m

ROAD (0.00 + 41.41 + 0.00) = 41.41 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     15   0.40  71.91   0.00 -19.69 -10.81   0.00   0.00   0.00  41.41
-------------------------------------------------------------------------------

Segment Leq : 41.41 dBA

Total Leq All Segments: 55.89 dBA

Results segment # 1: MavisNB (night)
-------------------------------------

Source height = 1.46 m

ROAD (0.00 + 45.57 + 0.00) = 45.57 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     40   0.39  66.87   0.00 -18.40  -2.11   0.00  -0.80   0.00  45.57
-------------------------------------------------------------------------------

Segment Leq : 45.57 dBA

Results segment # 2: MavisSB (night)
-------------------------------------

Source height = 1.46 m

ROAD (0.00 + 45.20 + 0.00) = 45.20 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     40   0.39  66.87   0.00 -18.77  -2.11   0.00  -0.80   0.00  45.20
-------------------------------------------------------------------------------

Segment Leq : 45.20 dBA

Results segment # 3: McLaughlin (night)
---------------------------------------

Source height = 1.08 m

ROAD (0.00 + 34.08 + 0.00) = 34.08 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     15   0.40  65.38   0.00 -19.69 -10.81   0.00  -0.80   0.00  34.08
-------------------------------------------------------------------------------

Segment Leq : 34.08 dBA

Total Leq All Segments: 48.56 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.89
                           (NIGHT): 48.56
```

```
STAMSON 5.0        NORMAL REPORT        Date: 13-03-2019 12:20:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: east.te              Time Period: Day/Night 16/8 hours
Description: Predicted daytime & nighttime sound levels at the top storey windows at
the East Façade, Prediction Location [C]

Road data, segment # 1: MavisNB (day/night)
-------------------------------------------
Car traffic volume  : 22275/2475  veh/TimePeriod
Medium truck volume :  1361/151   veh/TimePeriod
Heavy truck volume  :  1114/124   veh/TimePeriod
Posted speed limit  :    70 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: MavisNB (day/night)
-----------------------------------------
Angle1   Angle2           :  20.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 325.00 / 325.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: MavisSB (day/night)
-------------------------------------------
Car traffic volume  : 22275/2475  veh/TimePeriod  *
Medium truck volume :  1361/151   veh/TimePeriod  *
Heavy truck volume  :  1114/124   veh/TimePeriod  *
Posted speed limit  :    70 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):  27500
    Percentage of Annual Growth        :   2.50
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   5.50
    Heavy Truck  % of Total Volume     :   4.50
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: MavisSB (day/night)
-----------------------------------------
Angle1   Angle2           :  20.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 345.00 / 345.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: McLaughlin (day/night)
----------------------------------------------
Car traffic volume  : 33611/3735  veh/TimePeriod  *
Medium truck volume :   572/64    veh/TimePeriod  *
Heavy truck volume  :   468/52    veh/TimePeriod  *
Posted speed limit  :    70 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):  38500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: McLaughlin (day/night)
--------------------------------------------
Angle1   Angle2           : -20.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 370.00 / 370.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: MavisNB (day)
----------------------------------

Source height = 1.46 m

ROAD (0.00 + 49.45 + 0.00) = 49.45 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    20     90   0.39  73.40   0.00 -18.58  -5.37   0.00   0.00   0.00  49.45
-------------------------------------------------------------------------------

Segment Leq : 49.45 dBA

Results segment # 2: MavisSB (day)
----------------------------------

Source height = 1.46 m

ROAD (0.00 + 49.09 + 0.00) = 49.09 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    20     90   0.39  73.40   0.00 -18.95  -5.37   0.00   0.00   0.00  49.09
-------------------------------------------------------------------------------

Segment Leq : 49.09 dBA

Results segment # 3: McLaughlin (day)
-------------------------------------

Source height = 1.08 m

ROAD (0.00 + 49.45 + 0.00) = 49.45 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -20     90   0.40  71.91   0.00 -19.53  -2.94   0.00   0.00   0.00  49.45
-------------------------------------------------------------------------------

Segment Leq : 49.45 dBA

Total Leq All Segments: 54.10 dBA
```

```
Results segment # 1: MavisNB (night)
-----------------------------------

Source height = 1.46 m

ROAD (0.00 + 42.92 + 0.00) = 42.92 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    20     90   0.39  66.87   0.00 -18.58  -5.37   0.00   0.00   0.00  42.92
-------------------------------------------------------------------------------

Segment Leq : 42.92 dBA

Results segment # 2: MavisSB (night)
-----------------------------------

Source height = 1.46 m

ROAD (0.00 + 42.56 + 0.00) = 42.56 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    20     90   0.39  66.87   0.00 -18.95  -5.37   0.00   0.00   0.00  42.56
-------------------------------------------------------------------------------

Segment Leq : 42.56 dBA

Results segment # 3: McLaughlin (night)
---------------------------------------

Source height = 1.08 m

ROAD (0.00 + 42.92 + 0.00) = 42.92 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -20     90   0.40  65.38   0.00 -19.53  -2.94   0.00   0.00   0.00  42.92
-------------------------------------------------------------------------------

Segment Leq : 42.92 dBA

Total Leq All Segments: 47.57 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.10
                           (NIGHT): 47.57
```

```
STAMSON 5.0        NORMAL REPORT        Date: 13-03-2019 12:20:49
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: north.te             Time Period: Day/Night 16/8 hours
Description: Predicted daytime & nighttime sound levels at the top storey windows at
the North Façade, Prediction Location [D]

Road data, segment # 1: MavisNB (day/night)
-------------------------------------------
Car traffic volume  : 22275/2475  veh/TimePeriod
Medium truck volume :  1361/151   veh/TimePeriod
Heavy truck volume  :  1114/124   veh/TimePeriod
Posted speed limit  :    70 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: MavisNB (day/night)
-------------------------------------------
Angle1   Angle2           :  60.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 388.00 / 388.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: MavisSB (day/night)
-------------------------------------------
Car traffic volume  : 22275/2475  veh/TimePeriod  *
Medium truck volume :  1361/151   veh/TimePeriod  *
Heavy truck volume  :  1114/124   veh/TimePeriod  *
Posted speed limit  :    70 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):  27500
    Percentage of Annual Growth        :   2.50
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   5.50
    Heavy Truck  % of Total Volume     :   4.50
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: MavisSB (day/night)
-------------------------------------------
Angle1   Angle2           :  60.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 408.00 / 408.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: McLaughlin (day/night)
------------------------------------------------
Car traffic volume  : 33611/3735  veh/TimePeriod  *
Medium truck volume :   572/64    veh/TimePeriod  *
Heavy truck volume  :   468/52    veh/TimePeriod  *
Posted speed limit  :    70 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):  38500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: McLaughlin (day/night)
------------------------------------------------
Angle1   Angle2           : -40.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 300.00 / 300.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: MavisNB (day)
----------------------------------

Source height = 1.46 m

ROAD (0.00 + 43.40 + 0.00) = 43.40 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    60     90   0.39  73.40   0.00 -19.66 -10.35   0.00   0.00   0.00  43.40
-------------------------------------------------------------------------------

Segment Leq : 43.40 dBA

Results segment # 2: MavisSB (day)
----------------------------------

Source height = 1.46 m

ROAD (0.00 + 43.10 + 0.00) = 43.10 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    60     90   0.39  73.40   0.00 -19.96 -10.35   0.00   0.00   0.00  43.10
-------------------------------------------------------------------------------

Segment Leq : 43.10 dBA
```

```
Results segment # 3: McLaughlin (day)
-------------------------------------

Source height = 1.08 m

ROAD (0.00 + 51.54 + 0.00) = 51.54 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -40     90   0.40  71.91   0.00 -18.25  -2.12   0.00   0.00   0.00  51.54
-------------------------------------------------------------------------------

Segment Leq : 51.54 dBA

Total Leq All Segments: 52.67 dBA

Results segment # 1: MavisNB (night)
-------------------------------------

Source height = 1.46 m

ROAD (0.00 + 36.87 + 0.00) = 36.87 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    60     90   0.39  66.87   0.00 -19.66 -10.35   0.00   0.00   0.00  36.87
-------------------------------------------------------------------------------

Segment Leq : 36.87 dBA

Results segment # 2: MavisSB (night)
-------------------------------------

Source height = 1.46 m

ROAD (0.00 + 36.57 + 0.00) = 36.57 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    60     90   0.39  66.87   0.00 -19.96 -10.35   0.00   0.00   0.00  36.57
-------------------------------------------------------------------------------

Segment Leq : 36.57 dBA

Results segment # 3: McLaughlin (night)
---------------------------------------

Source height = 1.08 m

ROAD (0.00 + 45.01 + 0.00) = 45.01 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -40     90   0.40  65.38   0.00 -18.25  -2.12   0.00   0.00   0.00  45.01
-------------------------------------------------------------------------------

Segment Leq : 45.01 dBA

Total Leq All Segments: 46.14 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 52.67
                           (NIGHT): 46.14
```

```
STAMSON 5.0        NORMAL REPORT        Date: 07-08-2020 18:56:22
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: OLA.te               Time Period: 16 hours
Description: Predicted Daytime Sound Level in the Common Amenity Space (OLA),
Location [E]

Road data, segment # 1: MavisNB
-------------------------------
Car traffic volume  : 22275 veh/TimePeriod
Medium truck volume :  1361 veh/TimePeriod
Heavy truck volume  :  1114 veh/TimePeriod
Posted speed limit  :    70 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: MavisNB
------------------------------
Angle1   Angle2           : -40.00 deg   30.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 310.00 m
Receiver height           :   1.50 m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: MavisSB
-------------------------------
Car traffic volume  : 22275 veh/TimePeriod  *
Medium truck volume :  1361 veh/TimePeriod  *
Heavy truck volume  :  1114 veh/TimePeriod  *
Posted speed limit  :    70 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 2: MavisSB
------------------------------
Angle1   Angle2           : -40.00 deg   30.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 330.00 m
Receiver height           :   1.50 m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: MavisNB
-----------------------------

Source height = 1.46 m

ROAD (0.00 + 47.27 + 0.00) = 47.27 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -40     30   0.66  73.40   0.00 -21.83  -4.30   0.00   0.00   0.00  47.27
-------------------------------------------------------------------------------

Segment Leq : 47.27 dBA
```

```
Results segment # 2: MavisSB
----------------------------

Source height = 1.46 m

ROAD (0.00 + 46.82 + 0.00) = 46.82 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -40     30   0.66  73.40   0.00 -22.28  -4.30   0.00   0.00   0.00  46.82
-------------------------------------------------------------------------------

Segment Leq : 46.82 dBA

Total Leq All Segments: 50.06 dBA

TOTAL Leq FROM ALL SOURCES:       50.06
```

APPENDIX D
Responses to City of Mississauga Comments

Responses to City of Mississauga Comments dated October 28, 2019

The responses below are listed and numbered in the same order as shown in the comments.

35. As part of the processing of the above noted site plan application a noise concern was identified by the Development and Design Division due to noise levels from mechanical equipment, distant road traffic, and air traffic from Lester B. Pearson International Airport. A Noise Feasibility Study was prepared by HGC Engineering Howe Gastmeier Chapnik Limited dated March 13, 2019. Additional information should be added that demonstrates noise impacts from any proposed rooftop mechanical equipment, air conditions, and loading operations, on the private rear amenity spaces of the single detached houses on Rothschild Trail.

Additional information is provided in the revised noise study dated August 7, 2020.

43. The owner is to submit an updated Noise Study which is to include the following:

(i) On Section 4, indicate that Ultimate Traffic Data was obtained from the City of Mississauga.

Noted.

(ii) Provide all STAMSON outputs in the Appendix.

All STAMSON calculations have been included in Appendix C.

(iii) The Site Plan indicates that there will be an outdoor amenity area, therefore this area is to be assessed in the Noise Study.

An additional calculation was included for the outdoor amenity area. Stamson calculation is also provided in Appendix C.

(iv) Provide a table depicting the predicted indoor noise levels with the recommended construction requirements.

Per the MECP guidelines, the exterior façade constructions are provided to meet the indoor sound level limits of 45 dBA in the living/dining room and 40 dBA in the bedroom.

48. This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment, Conservation and Parks.

Acknowledged.