

**Noise Feasibility Report Update  
1786 Polaris Way, Mississauga  
July 2024**



Parnia L.M.



Parnia Lotfi Moghaddam P.Eng.

Principal Engineer | Senior Noise and Vibration Lead

## NOISE FEASIBILITY REPORT UPDATE

Prepared for:

Armstrong Planning Project Management  
1600 Steeles Avenue West  
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Prepared by:

Arcadis Professional Services (Canada) Inc.  
8133 Warden Avenue, Unit 300  
Markham, ON L6G 1B3  
Tel 1 905 763 2322

Our Ref.:

30214917

Client Ref.:

145121

Date:

July 2024

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## 1 INTRODUCTION

Arcadis Canada Inc. (Arcadis) was retained by Armstrong Planning Project Management to prepare a Noise Feasibility Report (NFR) Update (the “Study”) in support of the proposed residential development situated at 1786 Polaris Way (the “Site”) in the City of Mississauga, Ontario. This report supersedes the previous report dated February 2024 to address the City’s review comments and also update the noise analysis to reflect the changes on the revised site plan. This investigation examines the anticipated noise environment within the development area, scrutinizing its potential impact on future noise-sensitive receivers. The objective is to identify necessary noise control measures that align with the noise guidelines set forth by the Ontario Ministry of the Environment, Conservation and Parks (MECP) and meet the requirements of the City of Mississauga.

The methodology and approach employed in this noise report adhere to the MECP guideline NPC-300 “*Stationary and Transportation Sources – Approval and Planning*” (August 2013). The geographical context of the Site is illustrated in **Figure 1**. The Concept Plan encompasses thirty-four (34) townhouses and two (2) semi-detached houses with a combined Gross Floor Area (GFA) of 6373.82 m<sup>2</sup>.

The Site is positioned on the east side of Mississauga Road, more than 170 metres to the south of Eglinton Avenue West. The Site is surrounded by an institutional building (place of worship) to the north, a residential building to the south and green areas to the east. Additionally, there are present residential dwellings to the west of the Site across the Mississauga Road. This report is based on the Concept Plan crafted by Kingridge Developments, dated September 27, 2023 (“Issued for Review”) and February 13, 2024 (“Issued for Coordination”) which were provided on June 11, 2024 with a representation available in **Figure 2** and detailed in **Appendix A**.

## 2 SOURCES OF NOISE

### 2.1 Transportation Noise Sources

The primary sources of transportation noise in the proximity to the Site were determined to be vehicular traffic on Mississauga Road and Eglinton Avenue West. The Site is not impacted by rail noise or aircraft noise sources.

### 2.2 Stationary Noise Sources

It is assumed that the Heating, Ventilation, and Air Conditioning (HVAC) systems for the Site will be confined within a mechanical room, ensuring that stationary noise sources are absent on the subject Site, eliminating potential impacts on nearby noise-sensitive areas and the development itself. An aerial view analysis reveals the absence of foreseeable stationary sources in the Site's proximity that could adversely affect it in the near future. Consequently, a stationary noise analysis for the Site is deemed unnecessary.





Project No.: 30214917  
Date: Feb. 19, 2024

Prepared by: MH  
Reviewed by: PLM  
Revision: 1

**Project Name**

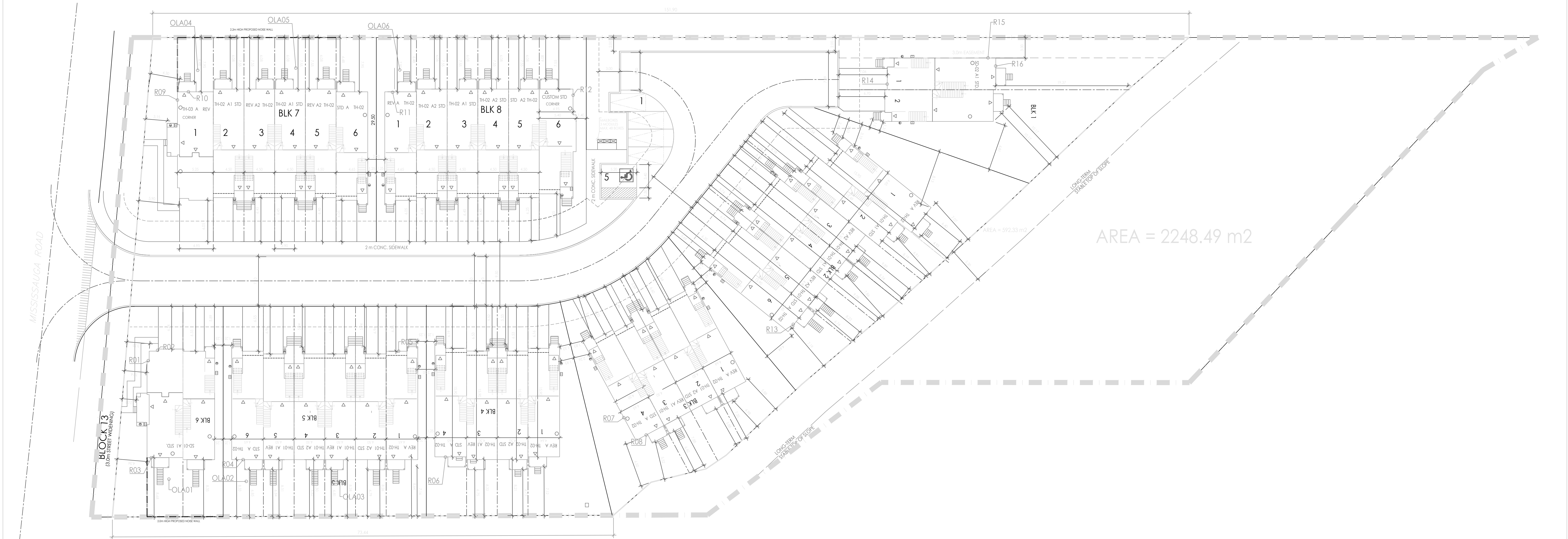
Noise Feasibility Study, 1786 Polaris Way, Mississauga, ON

**Figure Title**

An Aerial View of the Site Location and the Surrounding Land Uses

**Figure 1**





SITE STATISTICS		
LOT AREA	0.80 Ha	8090.75 m2
TOTAL GFA	6373.82 m2	
SEMI DETACHED	4	
3 ST. - FL TOWNS	32	
TOTAL NO. OF UNITS	36	
DENSITY	45 UPH	

PARKING STATISTICS			
	REQUIRED	PROPOSED	TOTAL SPACES
RESIDENCE SPACES	72 (2 SPACES PER UNIT)	72 (2 SPACES PER UNIT)	72
VISITOR SPACES	9 (0.25 SPACES PER UNIT)	5 (0.14 SPACES PER UNIT)	5
	TOTAL:		77



Project No.: 30214917  
Date.: July 19, 2024

Prepared by.: DS  
Reviewed by.: PLM  
Revision.: 1

Project Name.:  
Noise Feasibility Study Update, 1786 Polaris Way, Mississauga, ON

Figure Title.:  
Concept Plan Showing Location of the Receivers and the Noise Control Measures

Figure 2

## 3 NOISE CRITERIA FOR TRANSPORTATION NOISE

### 3.1 Indoor Noise Criteria

The impact of indoor sound levels resulting from road traffic was assessed in accordance with the noise criteria specified in the MECP guidelines. The prescribed indoor sound level limits, as per the MECP guidelines, for living or dining room areas during daytime (07:00-23:00) and nighttime (23:00-07:00) hours are  $L_{eq\ 16-hr}$  and  $L_{eq\ 8-hr}$  of 45 dBA. Similarly, for bedrooms, the indoor sound level limit during daytime is  $L_{eq\ 16-hr}$  of 45 dBA, and during nighttime hours is  $L_{eq\ 8-hr}$  of 40 dBA. To adhere to the stipulated limits by the MECP guidelines, detailed specifications for windows, doors, and exterior walls have been provided based on the anticipated outdoor sound levels. The mandatory limits applied to transportation noise sources outlined in the NPC-300 guideline are summarized in **Table 1**.

**Table 1: NPC-300 Guideline Indoor Sound Level Limits ( $L_{eq}$ )**

Type of Space	Time Period	$L_{eq}$ (dBA)	
		Road	Rail
Living/dining, den areas of residences	07:00 – 23:00	45	40
	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40
	23:00 – 07:00	40	35

Furthermore, ventilation requirements due to transportation noise sources, as per the NPC-300 guideline, are presented in below:

- Daytime Period, 07:00 – 23:00 Hours

Noise mitigation measures may be unnecessary if the  $L_{eq\ 16-hr}$  daytime sound level at a bedroom or living/dining room window is 55 dBA or less. Should the sound level exceed 55 dBA but not surpass 65 dBA, the dwelling should be constructed with a provision for the potential installation of central air conditioning in the future, at the discretion of the occupant. Additionally, it is required to include Warning Clause Type C. In cases where the daytime sound level at a bedroom or living/dining room window exceeds 65 dBA, the installation of central air conditioning is mandated, accompanied by Warning Clause Type D. Furthermore, building components, including windows, walls, and doors where applicable, should be designed to ensure compliance with the sound level limits outlined in the NPC-300 guideline.

- Nighttime Period, 23:00 – 07:00 Hours

The implementation of noise mitigation measures may not be necessary if the  $L_{eq\ 8-hr}$  nighttime sound level at a bedroom or living/dining room window is 50 dBA or less. Should the sound level exceed 50 dBA but not surpass 60 dBA, it is required for the dwelling to be constructed with a provision for potential future installation of central air conditioning, subject to the occupant's discretion. Additionally, it is recommended



to include Warning Clause Type C. In instances where the nighttime sound level at a bedroom or living/dining room window exceeds 60 dBA, the installation of central air conditioning is required, accompanied by Warning Clause Type D. Furthermore, building components, including windows, walls, and doors where applicable, should be designed to ensure compliance with the sound level limits stipulated in the NPC-300 guideline.

## 3.2 Outdoor Noise Criteria

The MECP guidelines stipulate that equivalent sound levels, denoted as  $L_{eq\ 16-hr}$ , should not exceed 55 dBA in an Outdoor Living Area(OLA). If the anticipated  $L_{eq\ 16-hr}$  surpasses 60 dBA, it is required to implement noise control measures to reduce the sound level to the acceptable threshold of 55 dBA. In instances where achieving the 55 dBA level is not technically feasible, sound levels within the range of 55 dBA to 60 dBA may be deemed acceptable. However, in such cases, it is crucial to inform the prospective occupants of the dwellings about potential noise issues through a warning clause. The specified limits are presented below:

- If the 16-Hour Equivalent Sound Level, denoted as  $L_{eq\ 16-hr}$ , within the OLA, surpasses 55 dBA but remains equal to or below 60 dBA, noise control measures may be implemented to reduce the sound level to 55 dBA. In the absence of such measures, potential buyers or tenants should be notified of potential noise issues through the inclusion of a Warning Clause Type A.
- In scenarios where the 16-Hour Equivalent Sound Level,  $L_{eq\ 16-hr}$ , within the OLA exceeds 60 dBA, mandatory noise control measures are required to lower the level to 55 dBA. Deviation above the limit of 55 dBA may be considered acceptable only in situations where the implementation of the necessary noise control measures is not feasible due to technical, economic, or administrative reasons, and this allowance comes with a Warning Clause Type B. It is essential to emphasize that any excess above the limit is deemed unacceptable if it exceeds 5 dBA in such circumstances.

## 4 METHODOLOGY

### 4.1 Traffic Data

Traffic noise emanating from Mississauga Road and Eglinton Avenue West constitutes the primary noise sources within the study area. Mississauga Road, positioned immediately west of the Site, carries a posted speed limit of 50 km/h, while Eglinton Avenue West, situated more than 170 metres to the north of the Site has a speed limit of 60 km/h. Sound level calculations were executed following the methodology outlined in MECP guidelines, incorporating the Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT).

Traffic data for Mississauga Road and Eglinton Avenue were obtained from the City of Mississauga. The data provided are for "Ultimate" traffic conditions (2041), therefore a growth factor was not applied to the AADT. As Eglinton Avenue West has a total of six (6) laneways in east-west directions, they were modeled as two (2) segments each for the STAMSON transportation analysis. The truck percentage, as well as the split between heavy and medium trucks within the "trucks" classification, were also provided. Predictions for road traffic noise were formulated based on the road traffic data specified in **Table 2**, with detailed information available in **Appendix B**.

**Table 2: Road Traffic Data Used in the Analysis**

Roadway	Future AADT	Medium Truck (%)	Heavy Truck (%)	Day/Night Ratio	Speed Limit (km/h)
Mississauga Road	11200	2.20	1.80	90/10	50
Eglinton Avenue West (Eastbound)	34150	1.65	1.35		60
Eglinton Avenue West (Westbound)	34150	1.65	1.35		

## 4.2 Noise Analysis

Assessments of noise impact on the Site were conducted, taking into account the anticipated highest traffic volume scenario. Both daytime and nighttime impacts from transportation noise were thoroughly examined. The analysis included a comprehensive evaluation of sixteen (16) facade receivers distributed at different Plane of Window (POW) locations across the Site. Backyard of the townhouses/semi-detached houses was considered as the OLA associated with each residential building. A total of six (6) OLA receivers located in close proximity to the road corridors were investigated in the Study. According to the NPC-300 guideline, the designated point of reception in an OLA at grade is positioned 3 metres from the building façade, 1.5 metres above grade, and aligned with the midpoint of the subject façade. Locations of the façade and OLA receivers are illustrated in **Figure 2**.

**Table 3** provides details on the worst-case daytime and nighttime predicted  $L_{eq}$  attributable to road traffic at the noise-sensitive receivers within the Site. Façade receivers are designated as R01 to R16, while OLA receivers are denoted as OLA01 to OLA06 on the Site Plan in **Figure 2**. Sample calculations are provided in **Appendix C** for reference.

**Table 3: Predicted Unattenuated Sound Levels for Transportation Noise Assessment**

Receiver ID	POW/OLA	Receiver Height (m)	Overall $L_{eq}$ (dBA)	Overall $L_{eq}$ (dBA)
			Day	Night
R01	POW	7.5	64	58
R02	POW	7.5	61	55
R03	POW	7.5	60	54
R04	POW	7.5	58	52
R05	POW	7.5	52	46
R06	POW	7.5	55	49
R07	POW	7.5	52	46
R08	POW	7.5	51	45
R09	POW	7.5	64	58
R10	POW	7.5	62	55

Receiver ID	POW/OLA	Receiver Height (m)	Overall $L_{eq}$ (dBA)	
			Day	Night
R11	POW	7.5	60	52
R12	POW	7.5	52	46
R13	POW	7.5	51	45
R14	POW	7.5	56	49
R15	POW	7.5	57	51
R16	POW	7.5	53	46
OLA01	OLA	1.5	61	n/a
OLA02	OLA	1.5	58	n/a
OLA03	OLA	1.5	57	n/a
OLA04	OLA	1.5	63	n/a
OLA05	OLA	1.5	60	55
OLA06	OLA	1.5	57	n/a

## 5 NOISE MITIGATION MEASURES

### 5.1 Building Façade Requirement

In accordance with the NPC-300 guideline, it is stated that “*If the nighttime sound level outside the bedroom or living/dining room windows exceeds 60 dBA or the daytime sound level outside the bedroom or living/dining area windows exceeds 65 dBA, building components including windows, walls and doors, where applicable, should be designed so that the indoor sound levels comply with the sound level limits.*”

Considering the anticipated POW sound levels outlined in **Table 3** and the NPC-300 guideline, it is determined that no upgrades to windows and walls are necessary to meet the MECP indoor sound level limits presented in **Table 1**. Consequently, exterior wall and window construction compliant with the Ontario Building Code (OBC) standards is deemed adequate for living/dining/sleeping quarters on all façades within the Site.

### 5.2 Ventilation Requirement

The living/dining/sleeping quarters of the residential units at Receivers R01, R02, R03, R04, R09, R10, R11, R14, and R15 experience a daytime sound level more than 55 dBA but less than 65 dBA. Moreover, Receivers R01, R02, R03, R04, R09, R10, R11, R14, R15, and R16 experience a nighttime sound level exceeding 50 dBA but less than 60 dBA. Therefore, the two semi-detached houses located at Block 1 and Block 6, and dwelling units located at Block 4, Block 5, Block 7 and Block 8 should incorporate forced-air heating with the potential for future air-conditioning. Additionally, these units are required to include a Warning Clause Type 'C' in their Agreements of Purchase/Sale or Lease/Rental agreements and/or

Condominium declarations. However, it is anticipated that the Site will implement a centralized air conditioning system at every building, thereby fulfilling the anticipated AC provision.

Warning Clause 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 level limits of the Municipality and the Ministry of the Environment."

### 5.3 Outdoor Living Areas

The outdoor amenity area situated at the semi-detached house (OLA01) is projected to have unmitigated equivalent sound levels of 61 dBA NPC-300 guideline explained in Section 3.2 of this Study, noise mitigation measures are mandated for OLA01. To address this issue, it is recommended to install a 2.0-metre high noise wall at the southwest corner of semi-detached unit on Block 6 flushed with its façade within the Site, along the westerly line. The noise wall should extend approximately 8.5 metres southerly, from the southwest corner of the building and 11 m along the rear property line. Implementing the noise wall would reduce the mitigated sound level from road traffic to 55 dBA for OLA01. The noise wall should be continuous, with a minimum surface density of 20 kg/m<sup>2</sup> and no cracks, gaps, or holes. Location and orientation of the proposed noise wall is shown in **Figure 2**.

The dwelling units located within the townhouse Block 5 (OLA02) is projected to have unmitigated equivalent sound levels of 58 dBA. As per the NPC-300 guideline explained in Section 3.2 of this Study, noise mitigation measures are not mandated for OLA02. However, the potential buyers or tenants associated with the two semi-detached houses, and Townhouse #4, 5 and 6 on Block 5 should be notified of potential noise issues through the inclusion of a Warning Clause Type A.

Furthermore, the projected sound levels at OLA04 and OLA05 related to the townhouse dwelling units located at Block 7 is 63 dBA and 60 dBA, respectively. Therefore, mandatory noise control measures are required at northerly section of the Site since the  $L_{eq\ 16-hr}$  at OLA04 exceeds 60 dBA. To address this issue, it is recommended to install a 2.2-metre high noise wall at the northwest corner of dwelling Unit 1 on Block 7 flushed with its façade to the north property line and along the northerly property line to the east limit of Unit 5. The noise wall should extend approximately 8 metres northerly and approximately 23 metres easterly, from the northwest corner of the Site. Implementing the noise wall would reduce the mitigated noise impact from road traffic to 55 dBA for OLA04 and OLA05. The noise wall should be continuous, with a minimum surface density of 20 kg/m<sup>2</sup> and no cracks, gaps, or holes. Location and orientation of the proposed noise wall is shown in **Figure 2**.

Warning Clause Type A:

"Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally 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."



## 6 CONCLUSIONS

This Study was conducted to evaluate the expected noise environment in the development area and assesses its potential impact on future noise-sensitive receivers. The predicted sound levels at a number of receivers exposed to the transportation sound sources will exceed the limits identified in the NPC-300 guideline. As such, the noise mitigation measures recommended below are required. Application of the mitigation measure ensures compliance with the MECP limits.

## 7 RECOMMENDATIONS

The following noise mitigation measures are recommended in order to attenuate sound levels at critical noise-sensitive receivers to meet MECP sound level limits. In adherence to the NPC-300 guideline, it is imperative to have a qualified Acoustical Consultant verify the implementation of all mandated noise control measures. The certification by an Acoustic Consultant extends to all relevant builder's plans, ensuring their alignment with the approved recommendations from the Noise Feasibility Study Update.

- Exterior wall and window construction compliant with the Ontario Building Code (OBC) standards is satisfactory for the entirety of the Living/Dining/Sleeping Quarters within the Site.
- The dwelling units located at Block 1, Block 5, Block 6, Block 7 and Block 8 should incorporate forced-air heating with the potential for future air-conditioning. Additionally, these units are required to include Warning Clause Type 'C' in their Agreements of Purchase/Sale or Lease/Rental agreements and/or Condominium declarations. Nevertheless, it is anticipated that the Site will implement a centralized air conditioning system at every building, thereby fulfilling the anticipated AC provision.
- The potential buyers or tenants associated with the dwelling units located at townhouse #4, 5 and 6 on Block 5 should be notified of potential noise issues through the inclusion of a Warning Clause Type A.
- It is recommended to install a 2.0-metre high noise wall at the southwest corner of semi-detached unit on Block 6 flushed with its façade within the Site, along the westerly line. The noise wall should extend approximately 8.5 metres southerly, from the southwest corner of the building and 11 m along the rear property line. The noise wall must maintain continuity and possess a minimum surface density of 20 kg/m<sup>2</sup>, without any cracks, gaps, or holes.
- It is recommended to install a 2.2-metre high noise wall at the northwest corner of dwelling Unit 1 on Block 7 flushed with its façade to the north property line and along the northerly property line to the east limit of Unit 5. The noise wall should extend approximately 8 metres northerly and approximately 23 metres easterly, from the northwest corner of the Site. The noise wall must maintain continuity and possess a minimum surface density of 20 kg/m<sup>2</sup>, without any cracks, gaps, or holes.

Arcadis Professional Services (Canada) Inc.

8133 Warden Avenue, Unit 300

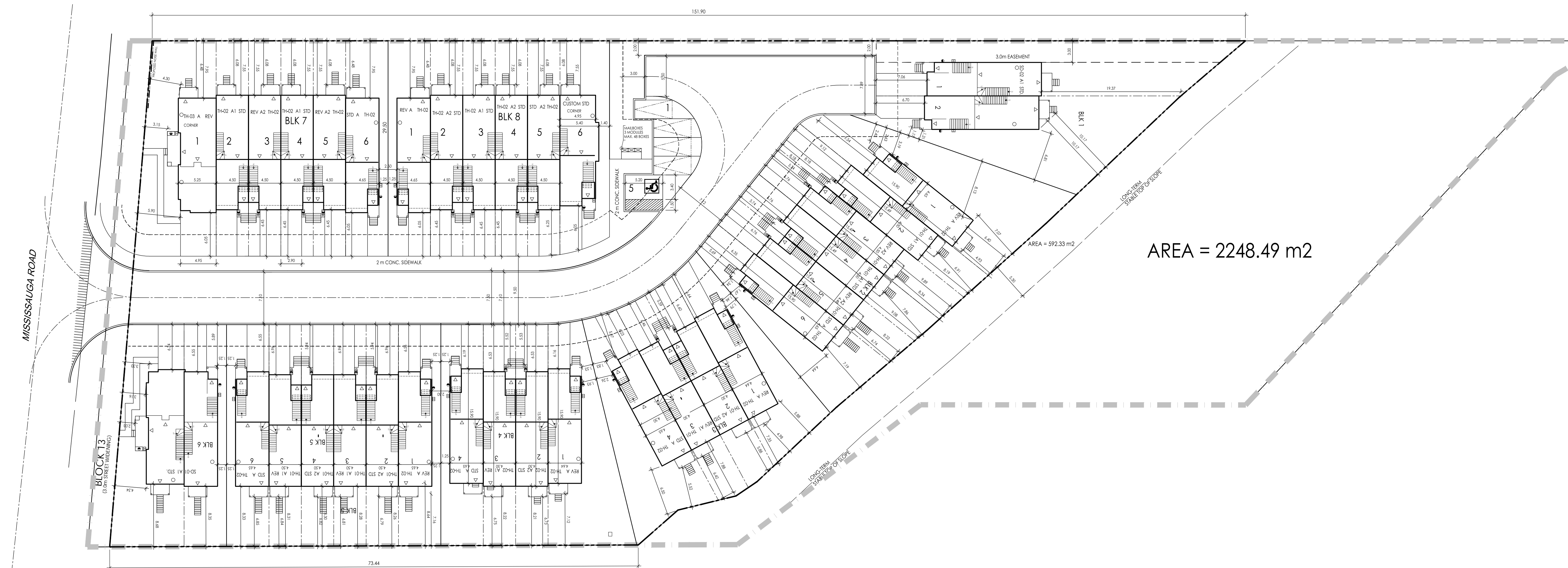
Markham, ON L6G 1B3

Tel 1 905 763 2322

[www.arcadis.com](http://www.arcadis.com)

# Appendix A

## Concept Plan



SITE STATISTICS		
LOT AREA	0.80 Ha	8090.75 m2
TOTAL GFA	6373.82 m2	
SEMI DETACHED	4	
3 ST. - FL TOWNS	32	
TOTAL NO. OF UNITS	36	
DENSITY	45 UPH	

PARKING STATISTICS			
	REQUIRED	PROPOSED	TOTAL SPACES
RESIDENCE SPACES	72 (2 SPACES PER UNIT)	72 (2 SPACES PER UNIT)	72
VISITOR SPACES	9 (0.25 SPACES PER UNIT)	5 (0.14 SPACES PER UNIT)	5
TOTAL:			77

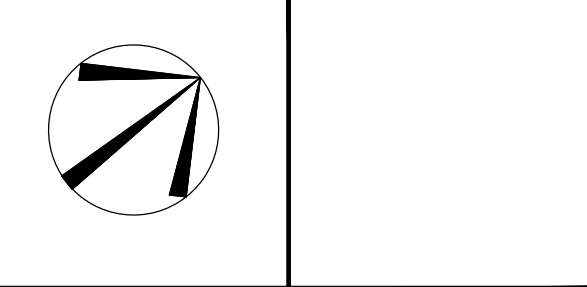
THESE DRAWINGS ARE NOT TO BE SCALED:  
ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR PRIOR TO  
COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES MUST BE  
REPORTED DIRECTLY TO SRN ARCHITECTS INC.

PROJECT CONSULTANTS:

[illegible][illegible]

**RN**  
**DESIGN**

WWW.RNDESIGN.COM  
T:905-738-3177  
WWW.THEPLUSGROUP.CA



C:\CLIENT

KINGRIDGE DEVELOPMENTS

PROJECT LOCATION

MISSISSAUGA RD PROPERTIES  
SOUTH SITE

DRAWING

CONCEPT PLAN

DATE 27-SEP-23	SCALE 1:300
DRAWN BY RP	CHECKED BY RP
PROJECT NUMBER 22070	DRAWING NUMBER A100



# Appendix B

## Road Traffic Data



Date: 14-Jun-24

REQUESTED BY:

Name: Parnia Lotfi Moghaddam  
Company: Arcadis Canada Inc  
Fax#

PREPARED BY:

Name: Simranpreet Singh  
Tel#: 905-615-3200 ext.5917

NOISE REPORT FOR PROPOSED DEVELOPMENT

Location: Mississauga Rd From Bridlepath Lane to Elginton Ave  
Elginton Ave W from Mississauga Rd to Hewicks Rd

ID# 624

ON SITE TRAFFIC DATA

Specific	Street Names				
	Mississauga Rd	Eglinton Ave W			
AADT:	11200	68300			
# of Lanes:	2	6			
% Trucks:	4%	3%			
Medium/Heavy Truck Ratio:	55/45	55/45			
Day/Night Split:	90/10	90/10			
Posted Speed Limit:	50 km/hr	60 km/hr			
Gradient of Road:	2%	2%			
Ultimate R.O.W.:	26 m	45 m			

Comments: Ultimate Traffic Only (2041)

# Appendix C

## Samples of STAMSON Analysis

Filename: r01rev.te                      Time Period: Day/Night 16/8 hours  
Description: R01 - Daytime and Nighttime Noise

Road data, segment # 1: Mississ. Rd (day/night)

-----  
Car traffic volume : 9677/1075 veh/TimePeriod \*  
Medium truck volume : 222/25 veh/TimePeriod \*  
Heavy truck volume : 181/20 veh/TimePeriod \*  
Posted speed limit : 50 km/h  
Road gradient : 2 %  
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11200  
Percentage of Annual Growth : 0.00  
Number of Years of Growth : 0.00  
Medium Truck % of Total Volume : 2.20  
Heavy Truck % of Total Volume : 1.80  
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Mississ. Rd (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 : 16.00 / 16.00 m  
Receiver height : 7.50 / 7.50 m  
Topography : 1 (Flat/gentle slope; no barrier)  
Reference angle : 0.00

Road data, segment # 2: Eglin. EB (day/night)

-----  
Car traffic volume : 29813/3313 veh/TimePeriod \*  
Medium truck volume : 507/56 veh/TimePeriod \*  
Heavy truck volume : 415/46 veh/TimePeriod \*  
Posted speed limit : 60 km/h  
Road gradient : 2 %  
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 34150  
Percentage of Annual Growth : 0.00



Number of Years of Growth	:	0.00
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 # 2: Eglin. EB (day/night)

Angle1	Angle2	:	-90.00 deg	0.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	0 / 0		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	225.00 / 225.00 m		
Receiver height	:	7.50 / 7.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

Road data, segment # 3: Eglin. WB (day/night)

Car traffic volume	:	29813/3313	veh/TimePeriod	*
Medium truck volume	:	507/56	veh/TimePeriod	*
Heavy truck volume	:	415/46	veh/TimePeriod	*
Posted speed limit	:	60 km/h		
Road gradient	:	2 %		
Road pavement	:	1	(Typical asphalt or concrete)	

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

24 hr Traffic Volume (AADT or SADT):	34150
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
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: Eglin. WB (day/night)

Angle1	Angle2	:	-90.00 deg	0.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	0 / 0		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	242.00 / 242.00 m		
Receiver height	:	7.50 / 7.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

Result summary (day)

	! source	! Road	! Total
	! height	! Leq	! Leq
	! (m)	! (dBA)	! (dBA)
1.Mississ. Rd	! 1.16	! 64.11	! 64.11
2.Eglin. EB	! 1.08	! 48.49	! 48.49
3.Eglin. WB	! 1.08	! 48.02	! 48.02
	!-----+-----+-----+-----!		
	Total		64.33 dBA

#### Result summary (night)

	! source	! Road	! Total
	! height	! Leq	! Leq
	! (m)	! (dBA)	! (dBA)
1.Mississ. Rd	! 1.16	! 57.57	! 57.57
2.Eglin. EB	! 1.08	! 41.95	! 41.95
3.Eglin. WB	! 1.08	! 41.48	! 41.48
	!-----+-----+-----+-----!		
	Total		57.79 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.33  
(NIGHT): 57.79



Filename: ola01mrv.te                      Time Period: 16 hours  
 Description: ola01 - Daytime Noise - 2.0m High Barrier

Road data, segment # 1: Mississ. Rd

-----  
 Car traffic volume : 9677 veh/TimePeriod \*  
 Medium truck volume : 222 veh/TimePeriod \*  
 Heavy truck volume : 181 veh/TimePeriod \*  
 Posted speed limit : 50 km/h  
 Road gradient : 2 %  
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mississ. Rd

-----  
 Angle1    Angle2                      : -90.00 deg    30.00 deg  
 Wood depth                            : 0                      (No woods.)  
 No of house rows                      : 0  
 Surface                                : 2                      (Reflective ground surface)  
 Receiver source distance : 21.00 m  
 Receiver height                        : 1.50 m  
 Topography                             : 2                      (Flat/gentle slope; with barrier)  
 Barrier angle1                        : -90.00 deg    Angle2 : 30.00 deg  
 Barrier height                         : 2.00 m  
 Barrier receiver distance : 3.00 m  
 Source elevation                       : 0.00 m  
 Receiver elevation                     : 0.00 m  
 Barrier elevation                      : 0.00 m  
 Reference angle                        : 0.00

Result summary

-----  

	! source !	Road !	Total
	! height !	Leq !	Leq
	! (m) !	(dBA) !	(dBA)
1.Mississ. Rd	! 1.16 !	54.39 !	54.39
Total			54.39 dBA

-----

TOTAL Leq FROM ALL SOURCES:                      54.39



Filename: ola05rev.te                      Time Period: 16 hours  
Description: OLA05 - Daytime Noise

Road data, segment # 1: Mississ. Rd

-----  
Car traffic volume : 9677 veh/TimePeriod \*  
Medium truck volume : 222 veh/TimePeriod \*  
Heavy truck volume : 181 veh/TimePeriod \*  
Posted speed limit : 50 km/h  
Road gradient : 2 %  
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mississ. Rd

-----  
Angle1    Angle2                      : -20.00 deg    90.00 deg  
Wood depth                            : 0                      (No woods.)  
No of house rows                      : 0  
Surface                                : 2                      (Reflective ground surface)  
Receiver source distance : 36.00 m  
Receiver height                        : 1.50 m  
Topography                             : 1                      (Flat/gentle slope; no barrier)  
Reference angle                        : 0.00

Road data, segment # 2: Eglin. EB

-----  
Car traffic volume : 29813 veh/TimePeriod \*  
Medium truck volume : 507 veh/TimePeriod \*  
Heavy truck volume : 415 veh/TimePeriod \*  
Posted speed limit : 60 km/h  
Road gradient : 2 %  
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Eglin. EB

-----  
Angle1    Angle2                      : -90.00 deg    90.00 deg  
Wood depth                            : 0                      (No woods.)  
No of house rows                      : 0  
Surface                                : 1                      (Absorptive ground surface)  
Receiver source distance : 182.00 m  
Receiver height                        : 1.50 m  
Topography                             : 1                      (Flat/gentle slope; no barrier)  
Reference angle                        : 0.00

Road data, segment # 3: Eglin. WB

```

-----
Car traffic volume : 29813 veh/TimePeriod *
Medium truck volume : 507 veh/TimePeriod *
Heavy truck volume : 415 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

```

Data for Segment # 3: Eglin. WB

```

-----
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 199.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑  
Result summary

```

-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Mississ. Rd ! 1.16 ! 58.45 ! 58.45
2.Eglin. EB ! 1.08 ! 50.76 ! 50.76
3.Eglin. WB ! 1.08 ! 50.12 ! 50.12
-----+-----+-----+-----
Total 59.65 dBA

```

↑

TOTAL Leq FROM ALL SOURCES: 59.65

↑

↑

Filename: ola05mrv.te                      Time Period: 16 hours  
Description: OLA05 - Daytime Noise - 2.2m Barrier

Road data, segment # 1: Mississ. Rd

-----  
Car traffic volume : 9677 veh/TimePeriod \*  
Medium truck volume : 222 veh/TimePeriod \*  
Heavy truck volume : 181 veh/TimePeriod \*  
Posted speed limit : 50 km/h  
Road gradient : 2 %  
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mississ. Rd

-----  
Angle1    Angle2                      : -16.00 deg    6.00 deg  
Wood depth                            : 0              (No woods.)  
No of house rows                      : 0  
Surface                                : 2              (Reflective ground surface)  
Receiver source distance : 36.00 m  
Receiver height                        : 1.50 m  
Topography                            : 2              (Flat/gentle slope; with barrier)  
Barrier angle1                        : -16.00 deg    Angle2 : 6.00 deg  
Barrier height                         : 2.20 m  
Barrier receiver distance : 20.50 m  
Source elevation                       : 0.00 m  
Receiver elevation                     : 0.00 m  
Barrier elevation                      : 0.00 m  
Reference angle                        : 0.00

Road data, segment # 2: Mississ. Rd

-----  
Car traffic volume : 9677 veh/TimePeriod \*  
Medium truck volume : 222 veh/TimePeriod \*  
Heavy truck volume : 181 veh/TimePeriod \*  
Posted speed limit : 50 km/h  
Road gradient : 2 %  
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Mississ. Rd

-----  
Angle1    Angle2                      : 6.00 deg    90.00 deg  
Wood depth                            : 0              (No woods.)  
No of house rows                      : 0  
Surface                                : 2              (Reflective ground surface)  
Receiver source distance : 36.00 m

Receiver height : 1.50 m  
 Topography : 2 (Flat/gentle slope; with barrier)  
 Barrier angle1 : 6.00 deg Angle2 : 90.00 deg  
 Barrier height : 2.20 m  
 Barrier receiver distance : 4.00 m  
 Source elevation : 0.00 m  
 Receiver elevation : 0.00 m  
 Barrier elevation : 0.00 m  
 Reference angle : 0.00

↑

Road data, segment # 3: Eglin. EB

-----  
 Car traffic volume : 29813 veh/TimePeriod \*  
 Medium truck volume : 507 veh/TimePeriod \*  
 Heavy truck volume : 415 veh/TimePeriod \*  
 Posted speed limit : 60 km/h  
 Road gradient : 2 %  
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: Eglin. EB

-----  
 Angle1 Angle2 : -90.00 deg -30.00 deg  
 Wood depth : 0 (No woods.)  
 No of house rows : 0  
 Surface : 1 (Absorptive ground surface)  
 Receiver source distance : 182.00 m  
 Receiver height : 1.50 m  
 Topography : 2 (Flat/gentle slope; with barrier)  
 Barrier angle1 : -90.00 deg Angle2 : -30.00 deg  
 Barrier height : 2.20 m  
 Barrier receiver distance : 5.00 m  
 Source elevation : 0.00 m  
 Receiver elevation : 0.00 m  
 Barrier elevation : 0.00 m  
 Reference angle : 0.00

↑

Road data, segment # 4: Eglin. EB

-----  
 Car traffic volume : 29813 veh/TimePeriod \*  
 Medium truck volume : 507 veh/TimePeriod \*  
 Heavy truck volume : 415 veh/TimePeriod \*  
 Posted speed limit : 60 km/h  
 Road gradient : 2 %  
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: Eglin. EB

-----  
 Angle1 Angle2 : -30.00 deg 90.00 deg

Wood depth : 0 (No woods.)  
 No of house rows : 0  
 Surface : 1 (Absorptive ground surface)  
 Receiver source distance : 182.00 m  
 Receiver height : 1.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑

Road data, segment # 5: Eglin. WB

-----  
 Car traffic volume : 29813 veh/TimePeriod \*  
 Medium truck volume : 507 veh/TimePeriod \*  
 Heavy truck volume : 415 veh/TimePeriod \*  
 Posted speed limit : 60 km/h  
 Road gradient : 2 %  
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 5: Eglin. WB

-----  
 Angle1 Angle2 : -90.00 deg -30.00 deg  
 Wood depth : 0 (No woods.)  
 No of house rows : 0  
 Surface : 1 (Absorptive ground surface)  
 Receiver source distance : 199.00 m  
 Receiver height : 1.50 m  
 Topography : 2 (Flat/gentle slope; with barrier)  
 Barrier angle1 : -90.00 deg Angle2 : -30.00 deg  
 Barrier height : 2.20 m  
 Barrier receiver distance : 5.00 m  
 Source elevation : 0.00 m  
 Receiver elevation : 0.00 m  
 Barrier elevation : 0.00 m  
 Reference angle : 0.00

↑

Road data, segment # 6: Eglin. WB

-----  
 Car traffic volume : 29813 veh/TimePeriod \*  
 Medium truck volume : 507 veh/TimePeriod \*  
 Heavy truck volume : 415 veh/TimePeriod \*  
 Posted speed limit : 60 km/h  
 Road gradient : 2 %  
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 6: Eglin. WB

-----  
 Angle1 Angle2 : -30.00 deg 90.00 deg  
 Wood depth : 0 (No woods.)  
 No of house rows : 0

Surface : 1 (Absorptive ground surface)  
 Receiver source distance : 199.00 m  
 Receiver height : 1.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑

# Result summary

-----

	! source !	Road !	Total !
	! height !	Leq !	Leq !
	! (m) !	(dBA) !	(dBA) !
1.Mississ. Rd	! 1.16 !	44.45 !	44.45
2.Mississ. Rd	! 1.16 !	50.37 !	50.37
3.Eglin. EB	! 1.08 !	40.67 !	40.67
4.Eglin. EB	! 1.08 !	49.37 !	49.37
5.Eglin. WB	! 1.08 !	40.07 !	40.07
6.Eglin. WB	! 1.08 !	48.73 !	48.73
	-----+-----+-----+-----		
	Total		55.05 dBA

↑

TOTAL Leq FROM ALL SOURCES: 55.05

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↑