



REPORT
Project: 126715-6.04

ENVIRONMENTAL NOISE IMPACT ASSESSMENT

723 PUTNEY CRESCENT, STITTSVILLE, OTTAWA



Prepared for Claridge Homes (Westwood) Inc.
by Arcadis

September 2026

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1 INTRODUCTION

Arcadis was retained by Claridge Homes to conduct an Environmental Noise Impact Assessment (ENIA) in support of a Site Plan Control application for a low to mid-rise residential development located at 723 Putney Crescent in Stittsville, Ottawa, Ontario.

The proposed development consists of approximately 120 back-to-back townhomes and is generally bound by the Hydro corridor to the north, Robert Grant Avenue to the east, future residential lands to the south, and Putney Crescent to the west.

This study evaluated the transportation-related noise levels within the subject development and recommended warning clauses or noise abatement measures for the Purchase and Sale of each dwelling unit, as required. The analysis for this study was conducted in accordance with the City of Ottawa 2016 Environmental Noise Control (ENC) Guidelines, as well as the Ministry of the Environment Publication NPC-300 (August 2013).

The site location and its surrounding context are shown in **FIGURE 1** below.

FIGURE 1 – Site Location



2 BACKGROUND

2.1 Noise Sources

The proposed development will be primarily subjected to roadway noise from Robert Grant Avenue. Abbott Street East is at least 150 metres north of the subject development and therefore the noise impacts associated with this major collector road do not need to be explicitly accounted for in the noise analysis conducted for this study.

The subject property is not located within the limits of the Airport Vicinity Development Zone (AVDZ) for the Ottawa International Airport, as shown on Schedule C14 of the 2021 Official Plan. Aircraft noise from the Ottawa International Airport is, therefore, not included in the analysis for this study.

There are no rail lines within 500 metres of the site, therefore no consideration has been given to the noise impacts from rail traffic, in accordance with the City of Ottawa ENC Guidelines.

2.2 Sound Level Limits for Road Traffic

Sound level criteria for road traffic, as described in the following sub-sections, was extracted from the ENC Guidelines and the Ministry of the Environment Publication NPC-300 (August 2013). Noise levels are expressed in the form Leq (T), which refers to a weighted level of a steady sound carrying the same total energy in the time period T (in hours) as the observed fluctuation sound.

2.2.1 Indoor Sound Level Criterion

The recommended indoor sound level criteria from Table 2.2b of the ENC Guidelines are as follows:

- Bedrooms – 23:00 to 07:00 – 40 dBA Leq (8 hours)
- Other areas – 07:00 to 23:00 – 45 dBA Leq (16 hours)

The sound levels are based on the windows and doors to an indoor space being closed.

The proposed development consists of three-storey, stacked townhome units. For the purpose of assessing the critical indoor noise in this study, the outdoor noise levels are observed at 7.5 metres above the ground for the plane of the living room for daytime noise and 7.5 metres above the ground to assess nighttime noise. This height was determined by reviewing the living room and bedroom window locations on the architectural drawings and shall be used to determine noise impacts for units directly facing or flanking Robert Grant Avenue.

As per NPC-300 C7.1.2.1 and C7.1.2.2, when the outdoor noise levels at the living room window are greater than 55 dBA and less than or equal to 65 dBA and/or greater than 50 dBA and less than or equal to 60 dBA at the bedroom window, then a warning clause specifying the use of forced air heating and a provision for central air conditioning is required. Should the outdoor noise levels exceed 65 dBA at the living room and/or exceed 60 dBA at the bedroom, then central air conditioning is mandatory, building components (walls, windows etc.) must be designed in compliance with the Ontario Building Code to achieve the indoor sound level criteria and a warning clause is required.

2.2.2 Outdoor Sound Level Criterion

As per Table 2.2a of the ENC Guidelines, the outdoor living area (OLA) sound level criteria for the daytime period between 07:00 and 23:00 hours is 55 dBA Leq (16). Sound levels for the OLA are typically calculated 3 metres from the building face at the centre of the building or within the centre of the OLA at a height of 1.5 metres above the ground. In this case, there is a shared amenity

space for all residents instead of separate private backyards. As such, this shared Outdoor Living Area was evaluated against the noise criteria.

If the Leq sound level is less than or equal to the above criteria, then no further action is required by the proponent. If the sound level exceeds the criteria by less than 5 dBA then the proponent may, with City approval, either provide a warning clause to prospective purchasers/tenants or install physical attenuation. For sound levels greater than 5 dBA above the criteria, control measures are required to reduce the noise levels as close to 55 dBA as technically, economically and administratively possible. Should the sound levels with the barrier in place exceed 55 dBA, then a warning clause is also required.

2.2.3 Indoor Sound Level Criterion – Building Components

As per NPC-300 C7.1.3, when the outdoor sound levels are less than or equal to 65 dBA at the living room window and/or less than or equal to 60 dBA at the bedroom level, then the building must be compliant with the Ontario Building Code. Should the outdoor sound levels exceed this criteria then the building component (walls, windows etc.) must be designed to achieve indoor sound level criteria.

3 ROADWAY NOISE

3.1 Traffic Volume Data

As mentioned previously, the major sources of road noise impacting the site are expected to originate from the traffic flows on Robert Grant Avenue.

Robert Grant Avenue

Robert Grant Avenue (also referred to as the North-South Arterial) is presently a two-lane urban arterial road with a posted speed limit of 60 km/h. The Fernbank Community Design Plan (CDP) indicates that this road will be eventually reconstructed to accommodate centre-median bus lanes, while also maintaining a single mixed traffic lane in each direction. For the purposes of this study, however, Robert Grant Avenue will be modelled as a four-lane divided arterial road (4-UAD), providing a more conservative assessment of noise impacts on the proposed development.

Traffic volume parameters for Robert Grant Avenue were extracted from Appendix B: Table B1 of the ENC Guidelines and are conservatively based on the capacity of this roadway type.

Table 3.1 below summarizes the traffic and road parameters used in this report.

TABLE 3.1: TRAFFIC AND ROAD DATA SUMMARY	
	ROBERT GRANT AVENUE (4-UAD)
Annual Average Daily Traffic (AADT)	35,000
Posted Speed Limit (km/h)	60
% Medium Trucks	7%
% Heavy Trucks	5%
% Daytime Traffic	92%

The remaining roads within the transportation network adjacent to the site are classified as local roads and are therefore expected to contribute minimal noise impacts to the proposed development.

Bobolink Ridge and Abbott Street East are located at least 140 metres from the nearest proposed dwelling units and are therefore unlikely to contribute to any significant noise impacts within the subject site.

3.2 Calculation Methods

Roadway noise is calculated using the STAMSON 5.04 computer program from the Ontario Ministry of the Environment, Conservation and Parks (MECP). There are outdoor living areas (OLAs) associated with the proposed development, as defined in the ENC Guidelines, therefore, these noise calculations are included for this study shown on **TABLE 3.2**.

Unattenuated daytime and nighttime noise levels at the building face calculated to determine indoor sound levels are shown on **TABLE 3.2**. below. Parameters used for calculating the noise levels, including the perpendicular distance from source to receiver and the roadway segment angles are also indicated. Since Robert Grant Avenue is modelled with its ultimate configuration as an arterial, four-lane divided road, the noise levels are calculated separately for the northbound and southbound lanes and then combined.

The noise parameters input into the STAMSON program, including source-receiver distances, noise angles, as well as source/ receiver locations are presented in **Noise Plan Dwg No.**

126715-N1, while the STAMSON noise calculations completed for this study are included in **Appendix A**.

TABLE 3.2: UNATTENUATED NOISE LEVELS AT BUILDING FACE

LOCATION		ROADWAY	SOURCE - RECEIVER DISTANCE (m)	SEGMENT ANGLES		INDOOR NOISE LEVELS (dBA)	
Building	UNIT			LEFT	RIGHT	DAYTIME	NIGHTTIME
Building A	1-3	Robert Grant Avenue	84.0/71.5	0	90	59.00	51.41
Building A	4-6	Robert Grant Avenue	91.5/79.0	0	90	58.40	50.81
Building A	7-9	Robert Grant Avenue	100.0/87.5	0	90	57.78	50.19
Building A	10-12	Robert Grant Avenue	108.0/95.5	0	90	57.25	49.65
Building B	1-3	Robert Grant Avenue	43.0/30.50	-90	90	67.01	59.41
Building B	4-6	Robert Grant Avenue	51.0/38.5	0	90	62.66	55.06
Building B	7-9	Robert Grant Avenue	59.0 /46.5	0	90	61.55	53.96
Building B	10-12	Robert Grant Avenue	67.0/54.5	0	90	60.62	53.03
Building C	1-3	Robert Grant Avenue	58.0/45.5	-85	80	64.57	56.97
Building C	4-6	Robert Grant Avenue	58.5/46.0	-85	75	64.42	56.83
Building C	7-9	Robert Grant Avenue	58.0/45.5	-75	75	64.35	56.75
Building C	10-12	Robert Grant Avenue	58.0/45.5	-85	65	64.17	56.57
Building D	1-3	Robert Grant Avenue	53.0/40.5	-80	90	65.28	57.68
Building D	4-6	Robert Grant Avenue	55.0/42.5	-80	85	64.97	57.37
Building D	7-9	Robert Grant Avenue	56.0/43.5	-80	85	64.83	57.24
Building D	10-12	Robert Grant Avenue	58.0/45.5	-85	80	64.57	56.97
Building E	1-3	Robert Grant Avenue	52.0/39.5	-55	90	64.90	57.30
Building E	4-6	Robert Grant Avenue	53.0/40.5	-65	90	65.00	57.41
Building E	7-9	Robert Grant Avenue	52.0/39.5	-70	90	65.25	57.66
Building E	10-12	Robert Grant Avenue	53.0/40.50	-75	90	65.20	57.61
Building F	1-3	Robert Grant Avenue	33.0/20.5	-90	90	69.26	61.66
Building F	4-6	Robert Grant Avenue	41.0/28.50	-90	0	64.39	56.79
Building F	7-9	Robert Grant Avenue	49.0/36.5	-90	0	62.97	55.37
Building F	10-12	Robert Grant Avenue	57.0/ 44.50	-90	0	61.82	54.22
Building G	1-3 (segment 1&2)	Robert Grant Avenue	77.0/64.50	-90	0	60.63	53.06
	1-3 (segment 3&4)	Robert Grant Avenue	77.0/64.50	20	40		
Building G	4-6	Robert Grant Avenue	85.0/72.5	-90	0	58.92	51.32
Building G	7-9	Robert Grant Avenue	93.0/80.50	-90	0	58.29	50.69
Building G	10-12	Robert Grant Avenue	101.0/88.50	-90	0	57.72	50.12

As indicated in **Table 3.2** above, there are numerous locations which exceed the noise criteria at the building face.

Since the dwelling units directly facing or flanking Robert Grant Avenue are consistently above the 65 dBA threshold, a review of building components has been conducted and presented in Section 4.2.

The timeline for the construction of the future residential block to the south is currently unknown, therefore no allowance has been made for these buildings in this study. It is expected that once this development is complete, then the noise levels for the dwelling units adjacent to this parcel will drop significantly.

TABLE 3.3: UNATTENUATED NOISE LEVELS AT OLA

LOCATION	ROADWAY	SOURCE - RECEIVER DISTANCE (m)	SEGMENT ANGLES		INDOOR NOISE LEVELS (dBA)	
Building		NB/ SB LANES	LEFT	RIGHT	DAYTIME	NIGHTTIME
Shared Amenity Area	Robert Grant Avenue	73.0/60.5	-20	20	56.41	48.81

As presented in **Table 3.3** above, an analysis of the shared amenity area identified on **Noise Plan Dwg No. 126715-N1** indicates that this location will experience noise levels above 55 dBA but below 60 dBA. As such, the need for abatement measures, including warning clauses or physical attenuation, will be reviewed in subsequent sections of this study.

4 ABATEMENT MEASURES

4.1 Indoor Sound Levels

For dwelling units facing or flanking onto Robert Grant Avenue, the daytime noise levels at the building face are shown to exceed 65 dBA, requiring mandatory central air conditioning, a review of the building components and a Type 'D' warning clause.

As discussed previously, all units within adjacent to the future residential block to the south will be temporarily subjected to noise levels above the 55 dBA threshold during the daytime. Once this development is built out, it is anticipated that sound levels at the building face are expected to drop to below 55 dBA.

Select dwelling units Buildings A, B, C, D, E, F and G will also experience noise levels in excess of 55 dBA. For all of the above dwelling units, an alternative means of ventilation is required as well as a Type 'C' warning clause in the Agreement of Purchase and Sale. Alternative means of ventilation usually consist of a forced air heating system with ducts sized for future installation of central air conditioning.

4.2 Building Components

Based on the results of the indoor noise assessment in **Table 3.2** above, an analysis of the required building components for dwelling units expected to experience noise levels at the building face exceeding 65 dBA has been conducted following the Sound Transmission Class (STC) Method. This method was developed by the National Research Council (NRC) and involves a review of architectural plans to determine appropriate design assumptions (i.e. window/floor area ratios) in order to calculate the STC rating for windows and glazed doors. In this particular circumstance, since architectural plans specific to the development were not available at the time of this study, a sample 'Taylor' model block townhouse end unit was used. The kitchen floor area dining room/ den was included in the 'living room' calculation during the daytime, as the architectural plans indicate that any interior partitioning between these living spaces may be optional. 'Bedroom' was used to calculate the STC rating during the nighttime, as this bedroom has the highest potential exposure from outdoor noise on Robert Grant Avenue, with two exterior walls.

The STC calculations were carried out to determine the required STC rating for exterior windows for both the side and front-facing walls for the 'Taylor' model back-to-back townhome units. Exterior walls were assumed to have an STC rating of 40, which is a conservative value for an insulated wood frame construction wall designed to accommodate Ottawa winters. With the

exterior walls in place, the amount of sound energy absorbed by the windows is calculated and the STC rating required to meet the sound criteria was determined. All rooms were assumed to have an intermediate absorptive interior rather than a hard or very absorptive interior, as would be expected for a residential unit. The required STC ratings for the windows and glazed doors are summarized in **Table 4.1** below. The highest required STC rating for front-facing windows was calculated to be 27, while the highest required STC rating for these components on the side wall was determined to be 22 for nighttime. The required STC rating for front-facing windows and glazed doors with the highest exposure to traffic noise was calculated to 24 for the critical daytime scenario.

STC calculations and sample architectural plans are included in **Appendix B** and **Appendix C**, respectively.

TABLE 4.1: REQUIRED STC RATINGS

DWELLING UNIT	LEVEL	ROOM TYPE	REQUIRED STC RATING
			WINDOWS & GLAZED DOORS
Building F (Unit 1-3) (Front Wall)	2 nd Floor	Bedroom	27
Building F (Unit 1-3) (Side Wall)		Bedroom	22
Building F (Unit 1-3) (Front Wall)	2 nd Floor	Living/Dinning	24

5 SUMMARY OF ATTENUATION MEASURES

5.1 Warning Clauses

A clause regarding noise must appear on the Agreement of Purchase and Sale on the title of the lots and townhouse units indicated on **Noise Plan Dwg No. 126715-N1**, as listed below:

Type 'C' Building 'A' – Units 1-3, 4-6, 7-9 and 10-12
 Building 'B' – Units 4-6, 7-9 and 10-12
 Building 'C' – Units 1-3, 4-6, 7-9 and 10-12
 Building 'D' – Units 4-6, 7-9 and 10-12
 Building 'E' – Units 1-3 and 4-6
 Building 'F' – Units 4-6, 7-9 and 10-12
 Building 'G' – Units 1-3, 4-6, 7-9 and 10-12

Type 'D' Building 'B' – Units 1-3
 Building 'D' – Units 1-3
 Building 'E' – Units 7-9 and 10-12
 Building 'F' – Units 1-3

The following warning clauses are taken from Section C8.1 of NPC 300:

Type C	"This dwelling unit has been fitted with a forced air heating system and the ducting, etc. was sized to accommodate central air conditioning. Installation of central air conditioning by the occupant will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the City's and the Ministry of the Environment's noise criteria. (Note: The location and installation of the outdoor air conditioning device should be done so as to comply with noise criteria of MOE Publication NPC-216, Residential Air Conditioning Devices and thus minimize the noise impacts both on and in the immediate vicinity of the subject property."
Type D	"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 City's and the Ministry of the Environment's noise criteria."

5.2 Ventilation Requirements and Building Components

All dwelling units requiring a Type 'C' warning clause listed in Section 5.1 shall have a forced air heating system sized to accommodate a central air conditioning system.

All dwelling units requiring a Type 'D' warning clause shall have mandatory central air conditioning and acoustical review of building components.

6 CONCLUSION

This report outlines the impact of roadway noise on the proposed 723 Putney Crescent development, located within the Fernbank community of Ottawa, Ontario. As indicated through the analysis conducted for this study, it is anticipated that noise levels will remain within the standards established by the City of Ottawa and Ministry of the Environment (MOE) with the exception of select units as indicated on **Noise Plan Dwg No. 126715-N1**. For these dwelling units, appropriate warning clauses and associated noise abatement measures must be provided on the Agreement of Purchase and Sale. Sound Transmission Class (STC) ratings for windows and glazed doors are provided for dwelling units with the highest exposure to Robert Grant Avenue.

7 PROFESSIONAL AUTHORIZATION

Prepared by:



Ben Pascolo-Neveu, P.Eng.
Transportation Engineer



APPENDIX A

NOISE CALCULATIONS (STAMSON)

Indoor Noise Calculations

STAMSON 5.0 NORMAL REPORT Date: 19-09-2026 08:41:22
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau1t3.te Time Period: Day/Night 16/8 hours
Description: building a 1-3 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 84.00 / 84.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 71.50 / 71.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 55.44 + 0.00) = 55.44 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-11.07	-4.15	0.00	0.00	0.00	55.44

Segment Leq : 55.44 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 56.48 + 0.00) = 56.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-10.04	-4.15	0.00	0.00	0.00	56.48

Segment Leq : 56.48 dBA

Total Leq All Segments: 59.00 dBA

↑

Results segment # 1: Robert Grant (night)

Source height = 1.50 m

ROAD (0.00 + 47.85 + 0.00) = 47.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-11.07	-4.15	0.00	0.00	0.00	47.85

Segment Leq : 47.85 dBA

↑

Results segment # 2: Robert Grant (night)

Source height = 1.50 m

ROAD (0.00 + 48.88 + 0.00) = 48.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-10.04	-4.15	0.00	0.00	0.00	48.88

Segment Leq : 48.88 dBA

Total Leq All Segments: 51.41 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 59.00
(NIGHT): 51.41

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 05-09-2026 11:59:12
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau4t6.te Time Period: Day/Night 16/8 hours
Description: building a unit 4-6 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 91.50 / 91.50 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 79.00 / 79.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 54.89 + 0.00) = 54.89 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-11.62	-4.15	0.00	0.00	0.00	54.89

Segment Leq : 54.89 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 55.84 + 0.00) = 55.84 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-10.68	-4.15	0.00	0.00	0.00	55.84

Segment Leq : 55.84 dBA

Total Leq All Segments: 58.40 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 47.30 + 0.00) = 47.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-11.62	-4.15	0.00	0.00	0.00	47.30

Segment Leq : 47.30 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 48.24 + 0.00) = 48.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-10.68	-4.15	0.00	0.00	0.00	48.24

Segment Leq : 48.24 dBA

Total Leq All Segments: 50.81 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 58.40
(NIGHT): 50.81

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 05-09-2026 12:06:47
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau7t9.te Time Period: Day/Night 16/8 hours
Description: building a unit 7-9 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 100.00 / 100.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 87.50 / 87.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 54.32 + 0.00) = 54.32 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-12.19	-4.15	0.00	0.00	0.00	54.32

Segment Leq : 54.32 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 55.18 + 0.00) = 55.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-11.34	-4.15	0.00	0.00	0.00	55.18

Segment Leq : 55.18 dBA

Total Leq All Segments: 57.78 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 46.73 + 0.00) = 46.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-12.19	-4.15	0.00	0.00	0.00	46.73

Segment Leq : 46.73 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 47.58 + 0.00) = 47.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-11.34	-4.15	0.00	0.00	0.00	47.58

Segment Leq : 47.58 dBA

Total Leq All Segments: 50.19 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 57.78
(NIGHT): 50.19

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 05-09-2026 12:16:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau10t12.te Time Period: Day/Night 16/8 hours
Description: building a unit 10-12 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 108.00 / 108.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 95.50 / 95.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 53.83 + 0.00) = 53.83 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-12.69	-4.15	0.00	0.00	0.00	53.83

Segment Leq : 53.83 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 54.62 + 0.00) = 54.62 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-11.90	-4.15	0.00	0.00	0.00	54.62

Segment Leq : 54.62 dBA

Total Leq All Segments: 57.25 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 46.23 + 0.00) = 46.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-12.69	-4.15	0.00	0.00	0.00	46.23

Segment Leq : 46.23 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 47.02 + 0.00) = 47.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-11.90	-4.15	0.00	0.00	0.00	47.02

Segment Leq : 47.02 dBA

Total Leq All Segments: 49.65 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 57.25
(NIGHT): 49.65

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 19-09-2026 09:08:17
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu1t3.te Time Period: Day/Night 16/8 hours
Description: building b 1-3 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 43.00 / 43.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 30.50 / 30.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 62.76 + 0.00) = 62.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	70.67	0.00	-6.77	-1.14	0.00	0.00	0.00	62.76

Segment Leq : 62.76 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 64.97 + 0.00) = 64.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	70.67	0.00	-4.56	-1.14	0.00	0.00	0.00	64.97

Segment Leq : 64.97 dBA

Total Leq All Segments: 67.01 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 55.16 + 0.00) = 55.16 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	63.07	0.00	-6.77	-1.14	0.00	0.00	0.00	55.16

Segment Leq : 55.16 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 57.37 + 0.00) = 57.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	63.07	0.00	-4.56	-1.14	0.00	0.00	0.00	57.37

Segment Leq : 57.37 dBA

Total Leq All Segments: 59.41 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 67.01
(NIGHT): 59.41

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 17-09-2026 15:23:09
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu4t6.te Time Period: Day/Night 16/8 hours
Description: building b unit 4-6 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 51.00 / 51.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 38.50 / 38.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 58.65 + 0.00) = 58.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-7.87	-4.15	0.00	0.00	0.00	58.65

Segment Leq : 58.65 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 60.46 + 0.00) = 60.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-6.06	-4.15	0.00	0.00	0.00	60.46

Segment Leq : 60.46 dBA

Total Leq All Segments: 62.66 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 51.05 + 0.00) = 51.05 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-7.87	-4.15	0.00	0.00	0.00	51.05

Segment Leq : 51.05 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 52.86 + 0.00) = 52.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-6.06	-4.15	0.00	0.00	0.00	52.86

Segment Leq : 52.86 dBA

Total Leq All Segments: 55.06 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 62.66
(NIGHT): 55.06

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 17-09-2026 15:31:12
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu7t9.te Time Period: Day/Night 16/8 hours
Description: building b unit 7-9 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 59.00 / 59.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 46.50 / 46.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 57.71 + 0.00) = 57.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-8.80	-4.15	0.00	0.00	0.00	57.71

Segment Leq : 57.71 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 59.24 + 0.00) = 59.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-7.27	-4.15	0.00	0.00	0.00	59.24

Segment Leq : 59.24 dBA

Total Leq All Segments: 61.55 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 50.12 + 0.00) = 50.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-8.80	-4.15	0.00	0.00	0.00	50.12

Segment Leq : 50.12 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 51.65 + 0.00) = 51.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-7.27	-4.15	0.00	0.00	0.00	51.65

Segment Leq : 51.65 dBA

Total Leq All Segments: 53.96 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 61.55
(NIGHT): 53.96

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 08:53:04
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu10t12.te Time Period: Day/Night 16/8 hours
Description: building b unit 10-12 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 67.00 / 67.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 54.50 / 54.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 56.90 + 0.00) = 56.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-9.62	-4.15	0.00	0.00	0.00	56.90

Segment Leq : 56.90 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 58.22 + 0.00) = 58.22 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	70.67	0.00	-8.29	-4.15	0.00	0.00	0.00	58.22

Segment Leq : 58.22 dBA

Total Leq All Segments: 60.62 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 49.30 + 0.00) = 49.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-9.62	-4.15	0.00	0.00	0.00	49.30

Segment Leq : 49.30 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 50.63 + 0.00) = 50.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.48	63.07	0.00	-8.29	-4.15	0.00	0.00	0.00	50.63

Segment Leq : 50.63 dBA

Total Leq All Segments: 53.03 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 60.62
(NIGHT): 53.03

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 09:03:37
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu1t3.te Time Period: Day/Night 16/8 hours
Description: building c unit 1-3 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -85.00 deg 80.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 58.00 / 58.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -85.00 deg 80.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 45.50 / 45.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 60.71 + 0.00) = 60.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	80	0.48	70.67	0.00	-8.69	-1.27	0.00	0.00	0.00	60.71

Segment Leq : 60.71 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 62.27 + 0.00) = 62.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	80	0.48	70.67	0.00	-7.13	-1.27	0.00	0.00	0.00	62.27

Segment Leq : 62.27 dBA

Total Leq All Segments: 64.57 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.11 + 0.00) = 53.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	80	0.48	63.07	0.00	-8.69	-1.27	0.00	0.00	0.00	53.11

Segment Leq : 53.11 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 54.67 + 0.00) = 54.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	80	0.48	63.07	0.00	-7.13	-1.27	0.00	0.00	0.00	54.67

Segment Leq : 54.67 dBA

Total Leq All Segments: 56.97 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.57
(NIGHT): 56.97

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 09:16:04
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu4t6.te Time Period: Day/Night 16/8 hours
Description: building c unit 4-6 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -85.00 deg 75.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 58.50 / 58.50 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -85.00 deg 75.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 46.00 / 46.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 60.57 + 0.00) = 60.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	75	0.48	70.67	0.00	-8.75	-1.34	0.00	0.00	0.00	60.57

Segment Leq : 60.57 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 62.12 + 0.00) = 62.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	75	0.48	70.67	0.00	-7.20	-1.34	0.00	0.00	0.00	62.12

Segment Leq : 62.12 dBA

Total Leq All Segments: 64.42 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 52.98 + 0.00) = 52.98 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	75	0.48	63.07	0.00	-8.75	-1.34	0.00	0.00	0.00	52.98

Segment Leq : 52.98 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 54.52 + 0.00) = 54.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	75	0.48	63.07	0.00	-7.20	-1.34	0.00	0.00	0.00	54.52

Segment Leq : 54.52 dBA

Total Leq All Segments: 56.83 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.42
(NIGHT): 56.83

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 09:24:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu7t9.te Time Period: Day/Night 16/8 hours
Description: building c unit 7-9 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -75.00 deg 75.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 58.00 / 58.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -75.00 deg 75.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 45.50 / 45.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 60.49 + 0.00) = 60.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-75	75	0.48	70.67	0.00	-8.69	-1.49	0.00	0.00	0.00	60.49

Segment Leq : 60.49 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 62.05 + 0.00) = 62.05 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-75	75	0.48	70.67	0.00	-7.13	-1.49	0.00	0.00	0.00	62.05

Segment Leq : 62.05 dBA

Total Leq All Segments: 64.35 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 52.89 + 0.00) = 52.89 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-75	75	0.48	63.07	0.00	-8.69	-1.49	0.00	0.00	0.00	52.89

Segment Leq : 52.89 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 54.45 + 0.00) = 54.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-75	75	0.48	63.07	0.00	-7.13	-1.49	0.00	0.00	0.00	54.45

Segment Leq : 54.45 dBA

Total Leq All Segments: 56.75 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.35
(NIGHT): 56.75

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 09:44:55
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu10t12.te Time Period: Day/Night 16/8 hours
Description: building c unit 10-12 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -85.00 deg 60.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 58.00 / 58.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -85.00 deg 60.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 45.50 / 45.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 60.31 + 0.00) = 60.31 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	60	0.48	70.67	0.00	-8.69	-1.66	0.00	0.00	0.00	60.31

Segment Leq : 60.31 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 61.87 + 0.00) = 61.87 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	60	0.48	70.67	0.00	-7.13	-1.66	0.00	0.00	0.00	61.87

Segment Leq : 61.87 dBA

Total Leq All Segments: 64.17 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 52.71 + 0.00) = 52.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	60	0.48	63.07	0.00	-8.69	-1.66	0.00	0.00	0.00	52.71

Segment Leq : 52.71 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 54.27 + 0.00) = 54.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	60	0.48	63.07	0.00	-7.13	-1.66	0.00	0.00	0.00	54.27

Segment Leq : 54.27 dBA

Total Leq All Segments: 56.57 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.17
(NIGHT): 56.57

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 09:51:30
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu1t3.te Time Period: Day/Night 16/8 hours
Description: building d unit 1-3 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -80.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 53.00 / 53.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -80.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 40.50 / 40.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 61.32 + 0.00) = 61.32 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	90	0.48	70.67	0.00	-8.11	-1.23	0.00	0.00	0.00	61.32

Segment Leq : 61.32 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 63.05 + 0.00) = 63.05 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	90	0.48	70.67	0.00	-6.38	-1.23	0.00	0.00	0.00	63.05

Segment Leq : 63.05 dBA

Total Leq All Segments: 65.28 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.72 + 0.00) = 53.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	90	0.48	63.07	0.00	-8.11	-1.23	0.00	0.00	0.00	53.72

Segment Leq : 53.72 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 55.45 + 0.00) = 55.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	90	0.48	63.07	0.00	-6.38	-1.23	0.00	0.00	0.00	55.45

Segment Leq : 55.45 dBA

Total Leq All Segments: 57.68 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 65.28
(NIGHT): 57.68

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 09:58:38
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu4t6.te Time Period: Day/Night 16/8 hours
Description: building d unit 4-6 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -80.00 deg 85.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 55.00 / 55.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -80.00 deg 85.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 42.50 / 42.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 61.05 + 0.00) = 61.05 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	85	0.48	70.67	0.00	-8.35	-1.27	0.00	0.00	0.00	61.05

Segment Leq : 61.05 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 62.71 + 0.00) = 62.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	85	0.48	70.67	0.00	-6.69	-1.27	0.00	0.00	0.00	62.71

Segment Leq : 62.71 dBA

Total Leq All Segments: 64.97 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.45 + 0.00) = 53.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	85	0.48	63.07	0.00	-8.35	-1.27	0.00	0.00	0.00	53.45

Segment Leq : 53.45 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 55.11 + 0.00) = 55.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	85	0.48	63.07	0.00	-6.69	-1.27	0.00	0.00	0.00	55.11

Segment Leq : 55.11 dBA

Total Leq All Segments: 57.37 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.97
(NIGHT): 57.37

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 10:03:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu7t9.te Time Period: Day/Night 16/8 hours
Description: building d unit 7-9 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -80.00 deg 85.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 56.00 / 56.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -80.00 deg 85.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 43.50 / 43.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 60.93 + 0.00) = 60.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	85	0.48	70.67	0.00	-8.47	-1.27	0.00	0.00	0.00	60.93

Segment Leq : 60.93 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 62.56 + 0.00) = 62.56 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	85	0.48	70.67	0.00	-6.84	-1.27	0.00	0.00	0.00	62.56

Segment Leq : 62.56 dBA

Total Leq All Segments: 64.83 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.34 + 0.00) = 53.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	85	0.48	63.07	0.00	-8.47	-1.27	0.00	0.00	0.00	53.34

Segment Leq : 53.34 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 54.96 + 0.00) = 54.96 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	85	0.48	63.07	0.00	-6.84	-1.27	0.00	0.00	0.00	54.96

Segment Leq : 54.96 dBA

Total Leq All Segments: 57.24 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.83
(NIGHT): 57.24

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 10:16:48
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu10t12.te Time Period: Day/Night 16/8 hours
Description: building d unit 10-12 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -85.00 deg 80.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 58.00 / 58.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -85.00 deg 80.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 45.50 / 45.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 60.71 + 0.00) = 60.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	80	0.48	70.67	0.00	-8.69	-1.27	0.00	0.00	0.00	60.71

Segment Leq : 60.71 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 62.27 + 0.00) = 62.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	80	0.48	70.67	0.00	-7.13	-1.27	0.00	0.00	0.00	62.27

Segment Leq : 62.27 dBA

Total Leq All Segments: 64.57 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.11 + 0.00) = 53.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	80	0.48	63.07	0.00	-8.69	-1.27	0.00	0.00	0.00	53.11

Segment Leq : 53.11 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 54.67 + 0.00) = 54.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	80	0.48	63.07	0.00	-7.13	-1.27	0.00	0.00	0.00	54.67

Segment Leq : 54.67 dBA

Total Leq All Segments: 56.97 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.57
(NIGHT): 56.97

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 10:24:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: beu1t3.te Time Period: Day/Night 16/8 hours
Description: building e unit 1-3 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -55.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 52.00 / 52.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -55.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 39.50 / 39.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 60.92 + 0.00) = 60.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-55	90	0.48	70.67	0.00	-7.99	-1.76	0.00	0.00	0.00	60.92

Segment Leq : 60.92 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 62.68 + 0.00) = 62.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-55	90	0.48	70.67	0.00	-6.22	-1.76	0.00	0.00	0.00	62.68

Segment Leq : 62.68 dBA

Total Leq All Segments: 64.90 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.32 + 0.00) = 53.32 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-55	90	0.48	63.07	0.00	-7.99	-1.76	0.00	0.00	0.00	53.32

Segment Leq : 53.32 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 55.09 + 0.00) = 55.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-55	90	0.48	63.07	0.00	-6.22	-1.76	0.00	0.00	0.00	55.09

Segment Leq : 55.09 dBA

Total Leq All Segments: 57.30 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.90
(NIGHT): 57.30

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 10:29:54
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: beu4t6.te Time Period: Day/Night 16/8 hours
Description: building e unit 4-6 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -65.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 53.00 / 53.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -65.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 40.50 / 40.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 61.04 + 0.00) = 61.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-65	90	0.48	70.67	0.00	-8.11	-1.51	0.00	0.00	0.00	61.04

Segment Leq : 61.04 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 62.77 + 0.00) = 62.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-65	90	0.48	70.67	0.00	-6.38	-1.51	0.00	0.00	0.00	62.77

Segment Leq : 62.77 dBA

Total Leq All Segments: 65.00 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.45 + 0.00) = 53.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-65	90	0.48	63.07	0.00	-8.11	-1.51	0.00	0.00	0.00	53.45

Segment Leq : 53.45 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 55.18 + 0.00) = 55.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-65	90	0.48	63.07	0.00	-6.38	-1.51	0.00	0.00	0.00	55.18

Segment Leq : 55.18 dBA

Total Leq All Segments: 57.41 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 65.00
(NIGHT): 57.41

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 10:34:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: beu7t9.te Time Period: Day/Night 16/8 hours
Description: building e unit 7-9 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -70.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 52.00 / 52.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -70.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 39.50 / 39.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 61.27 + 0.00) = 61.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	90	0.48	70.67	0.00	-7.99	-1.40	0.00	0.00	0.00	61.27

Segment Leq : 61.27 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 63.04 + 0.00) = 63.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	90	0.48	70.67	0.00	-6.22	-1.40	0.00	0.00	0.00	63.04

Segment Leq : 63.04 dBA

Total Leq All Segments: 65.25 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.68 + 0.00) = 53.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	90	0.48	63.07	0.00	-7.99	-1.40	0.00	0.00	0.00	53.68

Segment Leq : 53.68 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 55.44 + 0.00) = 55.44 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	90	0.48	63.07	0.00	-6.22	-1.40	0.00	0.00	0.00	55.44

Segment Leq : 55.44 dBA

Total Leq All Segments: 57.66 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 65.25
(NIGHT): 57.66

↑

↑

Filename: beu10t12.te Time Period: Day/Night 16/8 hours
Description: building e unit 10-12 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -75.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 53.00 / 53.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -75.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 40.50 / 40.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00



Segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 61.24 + 0.00) = 61.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-75	90	0.48	70.67	0.00	-8.11	-1.31	0.00	0.00	0.00	61.24

Segment Leq : 61.24 dBA



Segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 62.97 + 0.00) = 62.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-75	90	0.48	70.67	0.00	-6.38	-1.31	0.00	0.00	0.00	62.97

Segment Leq : 62.97 dBA

Total Leq All Segments: 65.20 dBA



Segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 53.65 + 0.00) = 53.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-75	90	0.48	63.07	0.00	-8.11	-1.31	0.00	0.00	0.00	53.65

Segment Leq : 53.65 dBA

↑

Segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 55.38 + 0.00) = 55.38 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-75	90	0.48	63.07	0.00	-6.38	-1.31	0.00	0.00	0.00	55.38

Segment Leq : 55.38 dBA

Total Leq All Segments: 57.61 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 65.20
(NIGHT): 57.61

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 08-09-2026 10:27:58
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bfu1t3.te Time Period: Day/Night 16/8 hours
Description: building f unit 1-3 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 33.00 / 33.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 20.50 / 20.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 64.46 + 0.00) = 64.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	70.67	0.00	-5.07	-1.14	0.00	0.00	0.00	64.46

Segment Leq : 64.46 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 67.52 + 0.00) = 67.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	70.67	0.00	-2.01	-1.14	0.00	0.00	0.00	67.52

Segment Leq : 67.52 dBA

Total Leq All Segments: 69.26 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 56.86 + 0.00) = 56.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	63.07	0.00	-5.07	-1.14	0.00	0.00	0.00	56.86

Segment Leq : 56.86 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 59.92 + 0.00) = 59.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	63.07	0.00	-2.01	-1.14	0.00	0.00	0.00	59.92

Segment Leq : 59.92 dBA

Total Leq All Segments: 61.66 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 69.26
(NIGHT): 61.66

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 17-09-2026 16:00:53
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bfu1t3.te Time Period: Day/Night 16/8 hours
Description: building f unit 1-3 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 33.00 / 33.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 20.50 / 20.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 64.46 + 0.00) = 64.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	70.67	0.00	-5.07	-1.14	0.00	0.00	0.00	64.46

Segment Leq : 64.46 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 67.52 + 0.00) = 67.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	70.67	0.00	-2.01	-1.14	0.00	0.00	0.00	67.52

Segment Leq : 67.52 dBA

Total Leq All Segments: 69.26 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 56.86 + 0.00) = 56.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	63.07	0.00	-5.07	-1.14	0.00	0.00	0.00	56.86

Segment Leq : 56.86 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 59.92 + 0.00) = 59.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	63.07	0.00	-2.01	-1.14	0.00	0.00	0.00	59.92

Segment Leq : 59.92 dBA

Total Leq All Segments: 61.66 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 69.26
(NIGHT): 61.66

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 17-09-2026 15:54:52
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bfu4t6.te Time Period: Day/Night 16/8 hours
Description: building f unit 4-6 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (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 : 41.00 / 41.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (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 : 28.50 / 28.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 60.05 + 0.00) = 60.05 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-6.46	-4.15	0.00	0.00	0.00	60.05

Segment Leq : 60.05 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 62.39 + 0.00) = 62.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-4.13	-4.15	0.00	0.00	0.00	62.39

Segment Leq : 62.39 dBA

Total Leq All Segments: 64.39 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 52.46 + 0.00) = 52.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-6.46	-4.15	0.00	0.00	0.00	52.46

Segment Leq : 52.46 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 54.79 + 0.00) = 54.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-4.13	-4.15	0.00	0.00	0.00	54.79

Segment Leq : 54.79 dBA

Total Leq All Segments: 56.79 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.39
(NIGHT): 56.79

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 17-09-2026 16:09:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bfu7t9.te Time Period: Day/Night 16/8 hours
Description: building f unit 7-9 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (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 : 49.00 / 49.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (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 : 36.50 / 36.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 58.91 + 0.00) = 58.91 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-7.61	-4.15	0.00	0.00	0.00	58.91

Segment Leq : 58.91 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 60.80 + 0.00) = 60.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-5.72	-4.15	0.00	0.00	0.00	60.80

Segment Leq : 60.80 dBA

Total Leq All Segments: 62.97 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 51.31 + 0.00) = 51.31 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-7.61	-4.15	0.00	0.00	0.00	51.31

Segment Leq : 51.31 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 53.20 + 0.00) = 53.20 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-5.72	-4.15	0.00	0.00	0.00	53.20

Segment Leq : 53.20 dBA

Total Leq All Segments: 55.37 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 62.97
(NIGHT): 55.37

↑

↑

Filename: bfu10t12.te Time Period: Day/Night 16/8 hours
Description: building f unit 10-12 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (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 : 57.00 / 57.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (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 : 44.50 / 44.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 57.94 + 0.00) = 57.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-8.58	-4.15	0.00	0.00	0.00	57.94

Segment Leq : 57.94 dBA

↑

Segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 59.53 + 0.00) = 59.53 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-6.99	-4.15	0.00	0.00	0.00	59.53

Segment Leq : 59.53 dBA

Total Leq All Segments: 61.82 dBA

↑

Segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 50.34 + 0.00) = 50.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-8.58	-4.15	0.00	0.00	0.00	50.34

Segment Leq : 50.34 dBA

↑

Segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 51.93 + 0.00) = 51.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-6.99	-4.15	0.00	0.00	0.00	51.93

Segment Leq : 51.93 dBA

Total Leq All Segments: 54.22 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 61.82
(NIGHT): 54.22

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 21-09-2026 13:02:30
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bgu1t3.te Time Period: Day/Night 16/8 hours
Description: building g unit 1-3 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (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 : 77.00 / 77.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (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 : 64.50 / 64.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00



Road data, segment # 3: Robert Grant NB (day/night)

 Car traffic volume : 14168/1232 veh/TimePeriod *
 Medium truck volume : 1127/98 veh/TimePeriod *
 Heavy truck volume : 805/70 veh/TimePeriod *
 Posted speed limit : 60 km/h
 Road gradient : 1 %
 Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 3: Robert Grant NB (day/night)

 Angle1 Angle2 : 20.00 deg 40.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 77.00 / 77.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00



Road data, segment # 4: Robert Grant SB (day/night)

 Car traffic volume : 11468/1232 veh/TimePeriod

Medium truck volume : 1127/98 veh/TimePeriod
 Heavy truck volume : 805/70 veh/TimePeriod
 Posted speed limit : 60 km/h
 Road gradient : 1 %
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: Robert Grant SB (day/night)

 Angle1 Angle2 : 20.00 deg 40.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 64.50 / 64.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 56.00 + 0.00) = 56.00 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-10.51	-4.15	0.00	0.00	0.00	56.00

Segment Leq : 56.00 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 57.14 + 0.00) = 57.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-9.38	-4.15	0.00	0.00	0.00	57.14

Segment Leq : 57.14 dBA

↑

Results segment # 3: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 50.30 + 0.00) = 50.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	40	0.48	70.67	0.00	-10.51	-9.85	0.00	0.00	0.00	50.30

Segment Leq : 50.30 dBA



Results segment # 4: Robert Grant SB (day)

Source height = 1.57 m

ROAD (0.00 + 51.28 + 0.00) = 51.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	40	0.48	70.49	0.00	-9.36	-9.85	0.00	0.00	0.00	51.28

Segment Leq : 51.28 dBA

Total Leq All Segments: 60.63 dBA



Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 48.41 + 0.00) = 48.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-10.51	-4.15	0.00	0.00	0.00	48.41

Segment Leq : 48.41 dBA



Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 49.54 + 0.00) = 49.54 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-9.38	-4.15	0.00	0.00	0.00	49.54

Segment Leq : 49.54 dBA

↑

Results segment # 3: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 42.70 + 0.00) = 42.70 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

20	40	0.48	63.07	0.00	-10.51	-9.85	0.00	0.00	0.00	42.70
----	----	------	-------	------	--------	-------	------	------	------	-------

Segment Leq : 42.70 dBA

↑

Results segment # 4: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 43.84 + 0.00) = 43.84 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

20	40	0.48	63.07	0.00	-9.38	-9.85	0.00	0.00	0.00	43.84
----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 43.84 dBA

Total Leq All Segments: 53.06 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 60.63

(NIGHT): 53.06

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 11:41:41
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bgu4t6.te Time Period: Day/Night 16/8 hours
Description: building g unit 4-6 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (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 : 85.00 / 85.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (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 : 72.50 / 72.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 55.37 + 0.00) = 55.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-11.15	-4.15	0.00	0.00	0.00	55.37

Segment Leq : 55.37 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 56.39 + 0.00) = 56.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-10.13	-4.15	0.00	0.00	0.00	56.39

Segment Leq : 56.39 dBA

Total Leq All Segments: 58.92 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 47.77 + 0.00) = 47.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-11.15	-4.15	0.00	0.00	0.00	47.77

Segment Leq : 47.77 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 48.79 + 0.00) = 48.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-10.13	-4.15	0.00	0.00	0.00	48.79

Segment Leq : 48.79 dBA

Total Leq All Segments: 51.32 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 58.92
(NIGHT): 51.32

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 11:46:36
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bgu7t9.te Time Period: Day/Night 16/8 hours
Description: building g unit 7-9 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (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 : 93.00 / 93.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (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 : 80.50 / 80.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 54.79 + 0.00) = 54.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-11.73	-4.15	0.00	0.00	0.00	54.79

Segment Leq : 54.79 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 55.72 + 0.00) = 55.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-10.80	-4.15	0.00	0.00	0.00	55.72

Segment Leq : 55.72 dBA

Total Leq All Segments: 58.29 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 47.19 + 0.00) = 47.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-11.73	-4.15	0.00	0.00	0.00	47.19

Segment Leq : 47.19 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 48.12 + 0.00) = 48.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-10.80	-4.15	0.00	0.00	0.00	48.12

Segment Leq : 48.12 dBA

Total Leq All Segments: 50.69 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 58.29
(NIGHT): 50.69

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 11:51:59
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bgu10t12.te Time Period: Day/Night 16/8 hours
Description: building g unit 10-12 indoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (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 : 101.00 / 101.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (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 : 88.50 / 88.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

 Source height = 1.50 m

ROAD (0.00 + 54.26 + 0.00) = 54.26 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-12.26	-4.15	0.00	0.00	0.00	54.26

Segment Leq : 54.26 dBA

↑

Results segment # 2: Robert Grant SB (day)

 Source height = 1.50 m

ROAD (0.00 + 55.11 + 0.00) = 55.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	70.67	0.00	-11.41	-4.15	0.00	0.00	0.00	55.11

Segment Leq : 55.11 dBA

Total Leq All Segments: 57.72 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 46.66 + 0.00) = 46.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-12.26	-4.15	0.00	0.00	0.00	46.66

Segment Leq : 46.66 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 47.51 + 0.00) = 47.51 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.48	63.07	0.00	-11.41	-4.15	0.00	0.00	0.00	47.51

Segment Leq : 47.51 dBA

Total Leq All Segments: 50.12 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 57.72
(NIGHT): 50.12

↑

↑

OLA Noise Calculations

STAMSON 5.0 NORMAL REPORT Date: 06-09-2026 13:58:38
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ca.te Time Period: Day/Night 16/8 hours
Description: Community Amenity outdoor

Road data, segment # 1: Robert Grant NB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Robert Grant NB (day/night)

Angle1 Angle2 : -20.00 deg 20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 73.00 / 73.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Robert Grant SB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Robert Grant SB (day/night)

 Angle1 Angle2 : -20.00 deg 20.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 60.50 / 60.50 m
 Receiver height : 1.50 / 1.00 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Robert Grant NB (day)

Source height = 1.50 m

ROAD (0.00 + 52.67 + 0.00) = 52.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	20	0.66	70.67	0.00	-11.41	-6.59	0.00	0.00	0.00	52.67

Segment Leq : 52.67 dBA

↑

Results segment # 2: Robert Grant SB (day)

Source height = 1.50 m

ROAD (0.00 + 54.02 + 0.00) = 54.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	20	0.66	70.67	0.00	-10.05	-6.59	0.00	0.00	0.00	54.02

Segment Leq : 54.02 dBA

Total Leq All Segments: 56.41 dBA

↑

Results segment # 1: Robert Grant NB (night)

Source height = 1.50 m

ROAD (0.00 + 45.07 + 0.00) = 45.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	20	0.66	63.07	0.00	-11.41	-6.59	0.00	0.00	0.00	45.07

Segment Leq : 45.07 dBA

↑

Results segment # 2: Robert Grant SB (night)

Source height = 1.50 m

ROAD (0.00 + 46.42 + 0.00) = 46.42 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	20	0.66	63.07	0.00	-10.05	-6.59	0.00	0.00	0.00	46.42

Segment Leq : 46.42 dBA

Total Leq All Segments: 48.81 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 56.41
(NIGHT): 48.81

↑

↑

APPENDIX B

SOUND TRANSMISSION CLASS (STC) CALCULATIONS

Bed Room/Side - Side 2nd Floor

Reverse Evaluation of Sound Transmission Class (STC) for Building Components

1.0	Free field sound level	61.66 dBA	Noise source
	Correction for reflections	3 dBA	Road ▼
	Outdoor sound level	64.66 dBA	Indoor Quarters
	Indoor sound level (Night time)	40 dBA	Sleeping ▼
	Required Noise Reduction (NR)	24.66 dB	Subtract indoor from outdoor sound level
2.0	Sound angle of incidence	0 to 90 degrees ▼	C ₁ Correction from Table 7.7
			0 dB
			Sum 24.66 dB

	Component:	Wall ▼	STC	40 dB
3.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft ▼	C ₄ from Table 7.10	7 dB
	Component category	d. Sealed thick window, or exterior wall, or roof/ceiling ▼	Correction	-7 dB
4.0	Room floor area	16.97 m ²	71.77372 % of floor area	
	Component Area	12.18 m ²		
	Room absorption category	Intermediate ▼	C ₃ from Table 7.9	-10 dB
			Correction	10 dB
5.0	Noise reduction if only this component transmits sound			43 dB
6.0	Required noise reduction (from Step 1)			25 dB
7.0	Term C ₂ : Subtract the Required NR from the Noise Reduction for this component			18 dB
8.0	Determine from Table 7.8 the corresponding value of total transmitted sound energy			5 %

	Component:	Window ▼	After step 2	24.66 dB
9.0	Transmits	95 % of total sound energy	C ₂ from Table 7.8	0 dB
10.0	Room floor area	16.97 m ²	9.074838 % of floor area	
	Component Area	1.54 m ²		
	Room absorption category	Intermediate ▼	C ₃ from Table 7.9	-10 dB
11.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft ▼	C ₄ from Table 7.10	7 dB
	Component category	d. Sealed thick window, or exterior wall, or roof/ceiling ▼		
	STC=NR+C ₁ +C ₂ +C ₃ +C ₄		Required STC	22

Tables from Environmental Noise Assessment in Land Use Planning, dated 1999, published by the MOE

Living/Dining Room - Front 2nd Floor

Reverse Evaluation of Sound Transmission Class (STC) for Building Components

1.0	Free field sound level	<u>69.26</u> dBA	Noise source
	Correction for reflections	<u>3</u> dBA	Road ▼
	Outdoor sound level	<u>72.26</u> dBA	Indoor Quarters
	Indoor sound level (Daytime)	<u>45</u> dBA	Living ▼
	Required Noise Reduction (NR)	<u>27.26</u> dB	Subtract indoor from outdoor sound level
2.0	Sound angle of incidence	0 to 90 degrees ▼	C ₁ Correction from Table 7.7 <u>0</u> dB
			Sum <u>27.26</u> dB

	Component:	Wall ▼	STC <u>40</u> dB
3.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft ▼	C ₄ from Table 7.10 <u>7</u> dB
	Component category	d. Sealed thick window, or exterior wall, or roof/ceiling ▼	Correction <u>-7</u> dB
4.0	Room floor area	<u>46.77</u> m ²	15.73658 % of floor area
	Component Area	<u>7.36</u> m ²	
	Room absorption category	Intermediate ▼	C ₃ from Table 7.9 <u>-10</u> dB
			Correction <u>10</u> dB
5.0	Noise reduction if only this component transmits sound		<u>43</u> dB
6.0	Required noise reduction (from Step 1)		<u>27</u> dB
7.0	Term C ₂ : Subtract the Required NR from the Noise Reduction for this component		<u>16</u> dB
8.0	Determine from Table 7.8 the corresponding value of total transmitted sound energy		<u>5</u> %

	Component:	Window ▼	After step 2 <u>27.26</u> dB
9.0	Transmits	95 % of total sound energy	C ₂ from Table 7.8 <u>0</u> dB
10.0	Room floor area	<u>46.77</u> m ²	8.980115 % of floor area
	Component Area	<u>4.20</u> m ²	
	Room absorption category	Intermediate ▼	C ₃ from Table 7.9 <u>-10</u> dB
11.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft ▼	C ₄ from Table 7.10 <u>7</u> dB
	Component category	d. Sealed thick window, or exterior wall, or roof/ceiling ▼	
	STC=NR+C ₁ +C ₂ +C ₃ +C ₄		Required STC <u>24</u>

Tables from Environmental Noise Assessment in Land Use Planning, dated 1999, published by the MOE

Bedroom - Front 2nd Floor

Reverse Evaluation of Sound Transmission Class (STC) for Building Components

1.0	Free field sound level	<u>61.66</u> dBA	Noise source
	Correction for reflections	<u>3</u> dBA	Road ▼
	Outdoor sound level	<u>64.66</u> dBA	Indoor Quarters
	Indoor sound level (Night time)	<u>40</u> dBA	Sleeping ▼
	Required Noise Reduction (NR)	<u>24.66</u> dB	Subtract indoor from outdoor sound level
2.0	Sound angle of incidence	0 to 90 degrees ▼	C ₁ Correction from Table 7.7 <u>0</u> dB
			Sum <u>24.66</u> dB

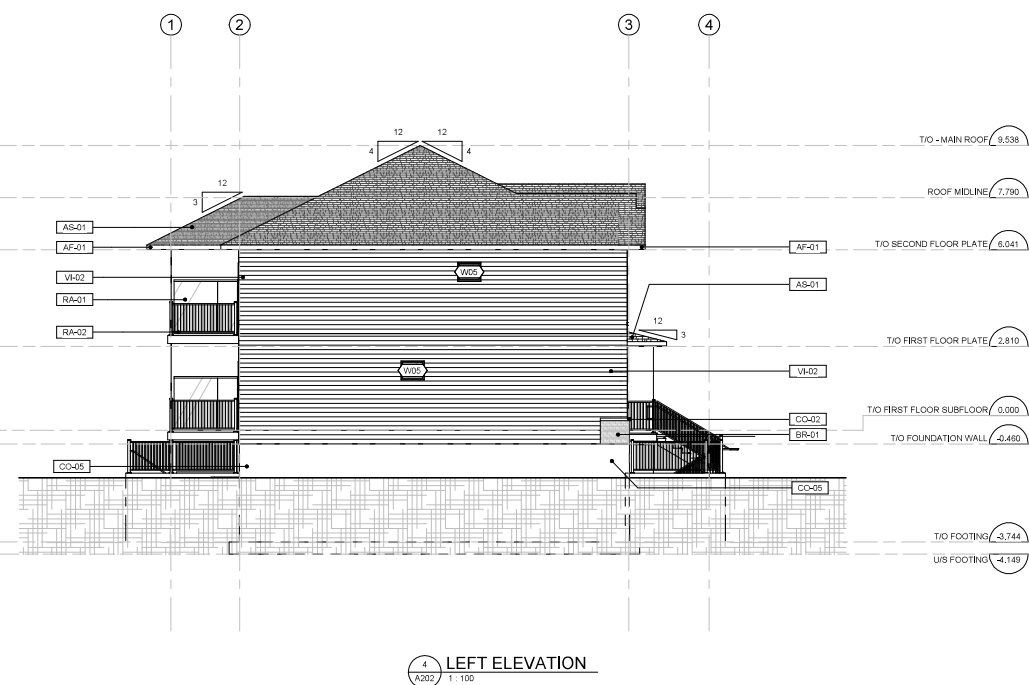
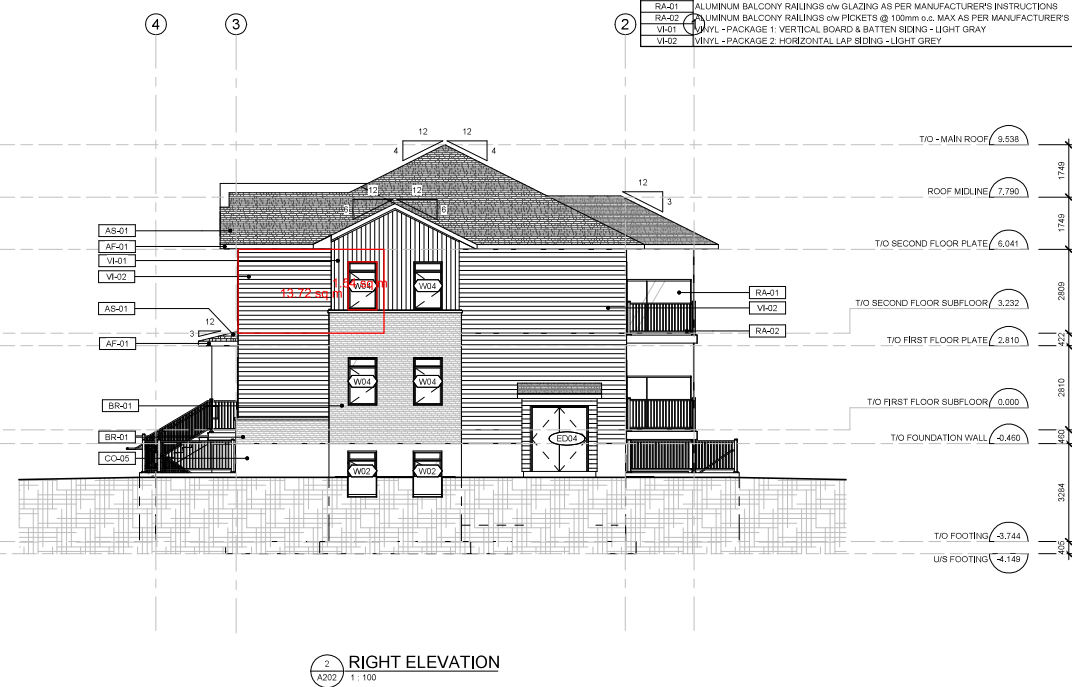
	Component:	Wall ▼	STC <u>40</u> dB
3.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft ▼	C ₄ from Table 7.10 <u>7</u> dB
	Component category	d. Sealed thick window, or exterior wall, or roof/ceiling ▼	Correction <u>-7</u> dB
4.0	Room floor area	<u>16.97</u> m ²	30.81909 % of floor area
	Component Area	<u>5.23</u> m ²	
	Room absorption category	Intermediate ▼	C ₃ from Table 7.9 <u>-5</u> dB
			Correction <u>5</u> dB
5.0	Noise reduction if only this component transmits sound		<u>38</u> dB
6.0	Required noise reduction (from Step 1)		<u>25</u> dB
7.0	Term C ₂ : Subtract the Required NR from the Noise Reduction for this component		<u>13</u> dB
8.0	Determine from Table 7.8 the corresponding value of total transmitted sound energy		<u>5</u> %

	Component:	Window ▼	After step 2 <u>24.66</u> dB
9.0	Transmits	95 % of total sound energy	C ₂ from Table 7.8 <u>0</u> dB
10.0	Room floor area	<u>16.97</u> m ²	25.16205 % of floor area
	Component Area	<u>4.27</u> m ²	
	Room absorption category	Intermediate ▼	C ₃ from Table 7.9 <u>-5</u> dB
11.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft ▼	C ₄ from Table 7.10 <u>7</u> dB
	Component category	d. Sealed thick window, or exterior wall, or roof/ceiling ▼	
	STC=NR+C ₁ +C ₂ +C ₃ +C ₄		Required STC <u>27</u>

Tables from Environmental Noise Assessment in Land Use Planning, dated 1999, published by the MOE

APPENDIX C

SAMPLE ARCHITECTURAL DRAWINGS



MATERIAL KEYNOTE LEGEND	
1	CONECRE FOUNDATION WALL DAMPPROOFING TO EXTEND DOWN AND OVER FOOTINGS, PARGING TO EXTEND 150mm BELOW GRADE
2	CLOTH COVERED DRAINAGE TIE & PERIMETER OF FOUNDATION WALL c/w 150mm MIN. GRANULAR COVER - ALL EXTERIOR CONNECTIONS TO BE COORDINATED WITH AND CONFIRMED BY CIVIL
3	ANCHOR TIE EMBEDDED IN CONCRETE FOUNDATION WALL THROUGH SILL PLATE
4	TYVEK RM BOARD WRAP c/w BATT INSULATION
AF-01	ALUMINUM PACKAGING - DARK GREY
AS-01	ASPHALT SHINGLES - DARK GREY
BR-01	MASONRY - ALUMINUM 1" ARBESCAFT CAMBRIDGE RENAISSANCE - BIRCHBARK
CO-02	PRECAST SILL
CO-03	PARGING
RA-01	ALUMINUM BALCONY RAILINGS c/w GLAZING AS PER MANUFACTURER'S INSTRUCTIONS
RA-02	ALUMINUM BALCONY RAILINGS c/w PICKETS @ 100mm c/c. MAX AS PER MANUFACTURER'S INSTRUCTIONS
UG-01	DRYLY - PACKAGE 1: VERTICAL BOARD & BATTEN SIDING - LIGHT GRAY
UG-02	PACKAGE 2: HORIZONTAL BOARD & BATTEN SIDING - LIGHT GRAY

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND TO REPORT ALL ERRORS AND/OR OMISSIONS TO THE ARCHITECT.

ALL CONTRACTORS MUST COMPLY WITH ALL

THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION
UNTIL SIGNED BY THE ARCHITECT.

DO NOT SCALE DRAWING.
COPYRIGHT RESERVED.

 PROTECTED OPENING WITH DELUGE SPRINKLERS

 OPERABLE GLAZING

03	ISSUED FOR REVISED SITE PLAN CONTROL APP.	251117
01	ISSUED FOR CLIENT COMMENTS	251015
No.	DESCRIPTION	YYYY-MM-DD

REVISIONS:

ARCHITECT SEAL:

ARCHITECT SEAL:	NORTH ARROW
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CLIENT:



ARCHITECT

rla / architecture
56 Beech Street, Ottawa, Ontario K1S 3J6
t.613.724.9932 f.613.724.1309 www.roderricklahey.ca

PROJECT TITLE

IRON VALLEY II - TERRACE
HOMES

5331 FERNBANK ROAD, OTTAWA, ON

SHEET TITLE

ELEVATIONS - BLACK & WHITE

DRAWN:

JWD

0110

SCALE:
1:100

1.100

PROJECT N
2022

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TABLE I
continued

SHEET No.

PLOT DATE: 2025-11-27 1:56:50 PM

PAPER SIZE: ISO Full A1 (707 00 x 1000 00mm)