



REPORT
Project: 135856-6.04.01

ENVIRONMENTAL NOISE IMPACT ASSESSMENT 4624 SPRATT ROAD



Prepared for Claridge Homes
by Arcadis
August 19, 2026

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1 Introduction

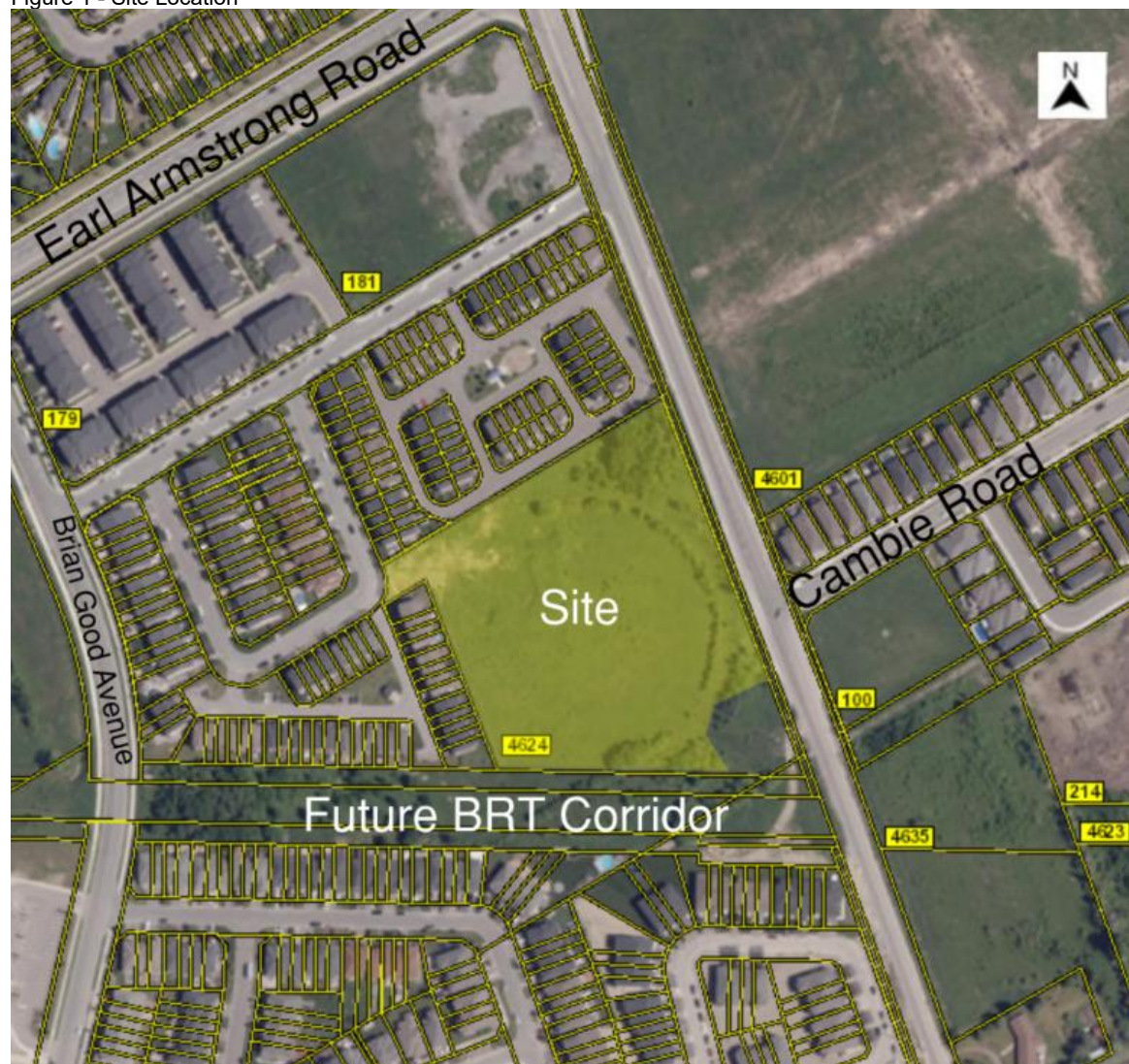
Arcadis was retained by Claridge Homes to conduct an Environmental Noise Impact Assessment (ENIA) in support of a Site Plan Control application for a mid-density residential development located at 4624 Spratt in the Riverside South Community of Ottawa, Ontario.

The proposed development consists of 108 residential dwelling units arranged in ten, three-storey blocks and is generally bound by Spratt Road to the east, the future Bus Rapid Transit (BRT) corridor to the south, as well as, low-rise residential to the north and 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 Spratt Road, as well as the future Bus Rapid Transit (BRT) corridor. All other roads within 100 metres of subject development are identified as local roads and therefore were not analysed as part of this study.

The subject property is 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. As such, aircraft noise will be considered in 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:

- Bedroom or Sleeping quarters – 23:00 to 07:00 – 40 dBA Leq (8 hours)
- Living/Dining/Den 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.

As discussed previously, the proposed development consists of 3-storey residential blocks, referred to herein as Buildings 'A' to 'I'. For the purpose of assessing noise levels at the building face, receptor locations were reviewed at 7.5 metres above ground level under both daytime and nighttime conditions to determine sound levels for the most exposed, third-storey windows.

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.

3 Roadway Noise

3.1 Traffic Volume Data

Based on the configuration of the collector and higher-order transportation network with respect to the proposed development, it is assumed that the major sources of transportation noise impacting the site will originate externally from Spratt Road to the west and the future BRT corridor to the south.

Borbridge Avenue is well separated from the subject site by at least 150 metres and screened existing street townhome units; therefore, no consideration of this collector road is required in the noise analysis for this study.

Spratt Road

Spratt Road presently exists as a two-lane, undivided major collector (2-UMCU) under the jurisdiction of the City of Ottawa with a posted speed limit of 60km/h.

Bus Rapid Transit (BRT) Corridor

Right-of-way is being protected for a future at-grade BRT corridor that will extend from Barrhaven Centre to the Riverside South Community Core. A portion of this protected corridor is abutting the subject development to the south and is approximately 40 metres in width.

Traffic volume parameters for Spratt Road were extracted from Appendix B: Table B1 of the ENC Guidelines and are conservatively based on the capacity of this roadway type, while assumptions for the BRT line were determined through correspondence with City of Ottawa technical staff (see **Appendix A**).

Table 1 below summarizes the traffic and road parameters used in this report. These parameters were extracted from Appendix B: Table B1 of the ENC Guidelines, and are conservatively based on roadway capacity.

Table 1 - TRAFFIC AND ROAD DATA SUMMARY

	SPRATT ROAD (2-UMCU)	BUS RAPID TRANSIT (BRT)
Annual Average Daily Traffic (AADT)	12,000	600 buses
Posted Speed Limit (km/h)	60	80
% Medium Trucks	7%	-
% Heavy Trucks	5%	-
% Daytime Traffic	92%	74%

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).

Unattenuated daytime and nighttime noise levels at the building face were calculated to determine indoor sound levels, the results of which are presented in below. Parameters used for calculating

the noise levels, including the perpendicular distance from source to receiver and the roadway segment angles are also indicated. The traffic noise for the BRT corridor was modelled using a custom noise source to remain consistent with other studies conducted within the Riverside South Community.

Locations of the indoor and outdoor receptors used for the noise calculations were selected to determine the limits of the noise criteria. For example, where dwelling units are flanking a major collector road, the limit of the Type 'C' warning clause for indoor noise is determined by calculating the closest dwelling unit that falls below the 55 dBA threshold. If the arrangement of the block mirrors a scenario which has already been modelled, then it is not necessary to repeat the calculations to determine the limits of the noise levels as STAMSON will produce the same overall result.

The results of the analysis for the indoor living area at the building face are presented in **Table 2** below. STAMSON noise calculations are included in **Appendix B**.

Table 2 - UNATTENUATED NOISE LEVELS AT BUILDING FACE

LOCATION		ROADWAY	SOURCE - RECEIVER DISTANCE (m)	SEGMENT ANGLES		INDOOR NOISE LEVELS (dBA)	
LOT/BLOCK	DESCRIPTION			LEFT	RIGHT	DAYTIME	NIGHTTIME
Building A	Units 1,2,3	Spratt Road	43.0	-10.00	55.00	57.88	50.24
Building A	Units 4,5,6	Spratt Road	35	-10.00	65.00	59.65	52.06
Building A	Units 7,8,9	Spratt Road	28	-10.00	75.00	61.43	53.83
Building A	Units 10,11,12	Spratt Road	20	-90.00	90.00	66.04	56.05
Building B	Units 10,11,12	Spratt Road	60	-10.00	35.00	53.99	46.39
Building D	Units 1,2,3	BRT	89.5	-15.00	90.00	54.63	53.10
Building E	Units 4, 5, 6	Spratt Road	50.0	-45.00	0.00	54.20	46.60
Building E	Units 7, 8, 9	Spratt Road	57.0	-50.00	0.00	55.44	47.85
Building E	Units 10,11,12	Spratt Road	42.0	-55.00	0.00	56.92	49.32
Building F	Units 1,2,3	Spratt Road	20.0	-90.00	90.00	66.04	58.44
Building F	Units 4,5,6	Spratt Road	20.0	-90.00	90.00	66.04	58.44
Building F	Units 7,8,9	Spratt Road	20.0	-90.00	90.00	66.04	58.44
Building F	Units 10,11,12	Spratt Road	21.0	-90.00	90.00	66.04	58.44
Building G	Units 1,2,3	Spratt Road	63.0	-10.00	65.00	55.57	47.97
Building G	Units 4,5,6	Spratt Road	55.0	-10.00	70.00	56.64	49.04
Building G	Units 7,8,9	Spratt Road	58.0	-15.00	75.00	56.75	49.15
Building G	Units 10,11,12	Spratt Road	40.0	-15.00	90.00	59.42	51.82
Building H	Units 1,2,3	Spratt Road	66.0	-50.00	60.00	58.05	56.00
		BRT	106.0	-10.00	30.00		
Building H	Units 4,5,6	Spratt Road	70.0	-45.00	60.00	57.75	55.51
		BRT	99.0	-10.00	35.00		
Building H	Units 7,8,9	Spratt Road	74.0	-40.00	60.00	57.56	55.07
		BRT	91.0	-10.00	40.00		
Building H	Units 10,11,12	Spratt Road	78.0	-65.00	55.00	57.71	54.79
		BRT	83.0	-10.00	55.00		
Building I	Units 1,2,3	Spratt Road	61.5	-50.00	90.00	59.60	54.74
		BRT	53.0	-90.00	-35.00		
Building I	Units 4,5,6	BRT	42.0	-20.00	90.00	59.65	58.12
Building I	Units 7,8,9	BRT	35.0	-20.00	90.00	60.80	59.27
Building I	Units 10,11,12	Spratt Road	73.5	0.00	90.00	64.40	62.74
		BRT	28.0	-90.00	90.00		

As indicated in **Table 2** above, there are numerous locations which exceed the 55 dBA daytime or 50 dBA nighttime noise criteria at the building face. Noise attenuation measures and warning clauses will therefore be considered in subsequent sections of the report.

As indicated on **Noise Plan – Drawing No. 135856-N1**, a greenspace bisected by a meandering walking path is located west of Buildings 'D' and 'H'. It is understood that this park is defined as an outdoor living area (OLA) in the ENC Guidelines, as it contributes to the required amenity space for this subject development and therefore was evaluated as part of this study. The results of the analysis for the outdoor amenity area are presented in **Table 3** below.

Table 3 - UNATTENUATED NOISE LEVELS AT OLA

LOCATION	ROADWAY	SOURCE - RECEIVER DISTANCE (m)	SEGMENT ANGLES		OUTDOOR NOISE LEVELS (dBA)
			LEFT	RIGHT	
Park (Shared Amenity Area) – P1	BRT	72.5	-60.00	20.00	54.05

As presented in **Table 3** above, an analysis of the shared amenity area at the P1 receptor location identified on **Noise Plan Drawing No. 135856-N1** indicates that this location will experience noise levels below 55 dBA. As such, there will be no need for abatement measures, including warning clauses or physical attenuation, will not be necessary in subsequent sections of this study.

3.3 Aircraft Sound Levels

As stated in Section 2.1, the subject lands are entirely located within the Airport Vicinity Development Zone (AVDZ). The site is, however, outside of the 25 NEF/NEP contour line so the building components and ventilation requirements of Part 6: Prescribed Measures for Aircraft Noise of the ENC Guidelines do not apply. A warning clause is required for the residential units inside the AVDZ, which in this case applies to all dwelling units proposed within the 4624 Spratt Road development.

Warning clause for aircraft noise is as follows:

“Purchasers/tenants are advised that due to the proximity of the Ottawa Macdonald-Cartier International Airport, noise from the airport and individual aircraft may at times interfere with outdoor or indoor activities”.

4 Abatement Measures

4.1 Indoor Sound Levels

As indicated previously in noise analysis conducted at the building face and summarized in Section 3.2.1, dwelling units directly facing or flanking Spratt Road or the future BRT corridor will have daytime noise levels exceeding 65 dBA under daytime conditions or 60 dBA under nighttime conditions. As such, central air conditioning, a review of the building components and a Type 'D' warning clause are required for these units.

Select dwelling units Buildings 'A', 'E', 'F', 'G', 'H' and 'I' with partial screening of traffic noise from adjacent buildings will also require attenuation measures. For all of these 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 Outdoor Living Areas (OLAs)

With respect to the OLA noise analysis presented in **Table 3** above, warning clause Type 'A' is proposed for the proposed shared amenity area/park-space in lieu of a noise barrier, as the unattenuated noise levels within the OLA are shown to remain below 60 dBA but will still exceed 55 dBA. Further, it is not practical or necessary to include a noise barrier around a shared park amenity space.

4.3 Building Components

Based on the results of the indoor noise assessment presented previously in **Table 2**, an analysis of the required building components for dwelling units exceeding noise levels at the building face of 65 dBA during the daytime or 60 dBA at nighttime, 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. The den/dining area 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. The dimensions of the master bedroom and daytime living space for unit G4 were used to calculate the STC ratings since receive the maximum exposure to transportation-related noise sources.

The STC calculations were carried out to determine the required STC rating for exterior windows and glazed doors for building facades with the highest exposure to traffic noise, including the east façade of Building 'F' and the west facade of Building 'I'. Exterior walls were assumed to have an STC rating of 40, which is a conservative value for a brick wall designed to accommodate Ottawa winters. With the exterior walls in place, the amount of sound energy absorbed by the windows was 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 below.

Sample architectural plans and STC calculations for dwelling units with direct exposure to either the future BRT corridor or Spratt Road are included in **Appendix C** and **Appendix D**, respectively.

Table 4 - REQUIRED STC RATINGS

DWELLING UNIT	LEVEL	ROOM TYPE	REQUIRED STC RATING
			WINDOWS & GLAZED DOORS
Buildings F (East Façade)	3 rd Floor	Living Room	21
Buildings F (East Façade) & Building I (West Façade)	3 rd Floor	Bedroom	28

As indicated in **Table 4** above, the required STC rating for windows and glazed doors with the highest exposure to traffic noise was calculated to be 28 for the critical nighttime scenario.

5 Summary of Attenuation Measures

5.1 Warning Clauses

A clause regarding noise must appear on the Agreement of Purchase and Sale for the impacted units, as indicated on **Noise Plan – Drawing No. 135856-N1** and listed below:

Type 'A'	All Units
Type 'C'	Building 'A' – Units 1-3, 4-6 and 7-9 Building 'E' – Units 7-9 and 10-12 Building 'H' – All Units Building 'I' – Units 1-3, 4-6 and 7-9 Building 'G' – All Units Building 'J' – All Units Building 'K' – All Units
Type 'D'	Building 'A' – Units 10-12 Building 'F' – All Units Building 'I' – Units 10 to 12

Aircraft Warning Applicable to all dwelling units within the 4624 Spratt Road development

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

Type 'A'	"Purchasers/tenants are advised that sound levels due to BRT traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment's noise criteria."
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."

The aircraft warning clause was provided previously in Section 3.3.

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, as identified in Section 5.1, shall have mandatory central air conditioning and acoustical review of building components.

6 Conclusion

This Environmental Noise Impact Assessment evaluated the impact of roadway noise on the proposed mid-density residential development, located within the Riverside South Community at 4624 Spratt, Ottawa. 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 identified on **Noise Plan – Drawing No.135856-N1**. For these dwelling units, appropriate warning clauses and associated noise abatement measures must be provided on the Agreement of Purchase and Sale for each unit. A noise barrier is not considered necessary between the proposed park and the future BRT corridor, as this area is a shared outdoor amenity space rather than a private rear yard. Since the subject site is located entirely within the Airport Vicinity Development Zone (AVDZ), a warning clause will be required in the Agreement of Purchase and Sale for each dwelling unit as well.



Ben Pascolo-Neveu, P.Eng.
Transportation Engineer

Appendix A

BRT Study Parameters

Lance Erion

From: Yousfani, Asad <Asad.Yousfani@ottawa.ca>
Sent: Monday, April 04, 2016 10:08 AM
To: Lance Erion
Cc: Kaufman, Cathlyn; Jim Burghout; Terry Brule
Subject: FW: BRRT

Hi Lance,

I've received the following information from Frank for you to update the noise study.

Thanks,

Asad

From: McKinney, Frank
Sent: Monday, April 04, 2016 9:39 AM
To: Yousfani, Asad
Subject: FW: BRRT

Hi Asad, as requested by IBI at Friday's meeting:

As per p. 5 of Appendix F, the vehicle type, volume and speed assumptions were as follows:

"The ENCG accepts noise models based on the Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT), including the computerized version, STAMSON (MOE 1996). These models have built-in sound power data for road vehicles; however, they do not specify values specifically for buses. Based on ENCG section 2.4.1, transitway buses should be classified as "medium trucks" for modeling purposes using STAMSON. However, the buses operating on the BRT are 60 foot articulating buses, with three axles and a weight over 18,000 kg. Based on the MOE "STAMSON Version 4.1 User's Guide", a vehicle with three or more axles and a weight greater than 12,000 kg should be considered as a "heavy truck" for modelling. Therefore, the proposed BRT buses were modelled as "heavy trucks". A summary of the model inputs is presented below in Table 3.

Table 3: Traffic Inputs for Surface Transportation Corridor Modelling

	Dedicated BRT Sections of Project	Transit Street without Proposed BRT	Transit Street with Median BRT
AADT	600	14000	14600
Speed Limit	80 km/h	60 km/h	60 km/h
Day / Night Split	74% / 26%	92% / 8%	91% / 9%
% Medium / % Heavy of Total Traffic	0% / 100%	7% / 5%	7% / 8%

Frank

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Appendix B

STAMSON Noise Calculations

Noise Calculations - Indoor

Filename: BA1T3.te Time Period: Day/Night 16/8 hours
 Description: BLDG A UNIT 1-3 INDOOR

Road data, segment # 1: spratt road (day/night)

 Car traffic volume : 9715/845 veh/TimePeriod *
 Medium truck volume : 773/67 veh/TimePeriod *
 Heavy truck volume : 552/48 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): 12000
 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: spratt road (day/night)

 Angle1 Angle2 : -15.00 deg 55.00 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

Results segment # 1: spratt road (day)

 Source height = 1.50 m

ROAD (0.00 + 57.88 + 0.00) = 57.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	55	0.48	69.03	0.00	-6.77	-4.37	0.00	0.00	0.00	57.88

 Segment Leq : 57.88 dBA

Total Leq All Segments: 57.88 dBA

Results segment # 1: spratt road (night)

 Source height = 1.50 m

ROAD (0.00 + 50.28 + 0.00) = 50.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	55	0.48	69.03	0.00	-6.77	-4.37	0.00	0.00	0.00	57.88

-15	55	0.48	61.43	0.00	-6.77	-4.37	0.00	0.00	0.00	50.28
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Segment Leq : 50.28 dBA

Total Leq All Segments: 50.28 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.88
(NIGHT): 50.28

Filename: BA4T6.te Time Period: Day/Night 16/8 hours
 Description: BLDG A UNIT 4-6 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -15.00 deg   65.00 deg
Wood depth          : 0           (No woods.)
No of house rows    : 0 / 0
Surface             : 1           (Absorptive ground surface)
Receiver source distance : 35.00 / 35.00 m
Receiver height     : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 59.65 + 0.00) = 59.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	65	0.48	69.03	0.00	-5.45	-3.93	0.00	0.00	0.00	59.65

Segment Leq : 59.65 dBA

Total Leq All Segments: 59.65 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 52.06 + 0.00) = 52.06 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	65	0.48	69.03	0.00	-5.45	-3.93	0.00	0.00	0.00	59.65

-15	65	0.48	61.43	0.00	-5.45	-3.93	0.00	0.00	0.00	52.06
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Segment Leq : 52.06 dBA

Total Leq All Segments: 52.06 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.65
(NIGHT): 52.06

Filename: BA7T9.te Time Period: Day/Night 16/8 hours
 Description: BLDG A UNIT 7T9 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -15.00 deg   75.00 deg
Wood depth          : 0           (No woods.)
No of house rows    : 0 / 0
Surface             : 1           (Absorptive ground surface)
Receiver source distance : 28.00 / 28.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 61.43 + 0.00) = 61.43 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	75	0.48	69.03	0.00	-4.01	-3.58	0.00	0.00	0.00	61.43

Segment Leq : 61.43 dBA

Total Leq All Segments: 61.43 dBA

Results segment # 1: spratt road (night)

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
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

-15	75	0.48	61.43	0.00	-4.01	-3.58	0.00	0.00	0.00	53.83
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 53.83 dBA

Total Leq All Segments: 53.83 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 61.43
(NIGHT): 53.83

Filename: BA10T12.te Time Period: Day/Night 16/8 hours
 Description: BLDG A UNIT 10-12 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    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): 12000
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: spratt road (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 : 20.00 / 29.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 66.04 + 0.00) = 66.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	69.03	0.00	-1.85	-1.14	0.00	0.00	0.00	66.04

Segment Leq : 66.04 dBA

Total Leq All Segments: 66.04 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 56.05 + 0.00) = 56.05 dBA

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

-90	90	0.48	61.43	0.00	-4.24	-1.14	0.00	0.00	0.00	56.05
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 56.05 dBA

Total Leq All Segments: 56.05 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.04
(NIGHT): 56.05

Filename: bdl1t3.te Time Period: Day/Night 16/8 hours
 Description: bldg d unit 1-3

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod
 Speed : 80 km/h

Data for Segment # 1: brt (day/night)

 Angle1 Angle2 : -15.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 89.50 / 89.50 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

Results segment # 1: brt (day)

 Source height = 2.40 m

RT/Custom (0.00 + 54.63 + 0.00) = 54.63 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	90	0.45	69.16	-11.27	-3.26	0.00	0.00	0.00	54.63

Segment Leq : 54.63 dBA

Total Leq All Segments: 54.63 dBA

Results segment # 1: brt (night)

 Source height = 2.40 m

RT/Custom (0.00 + 53.10 + 0.00) = 53.10 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	90	0.45	67.63	-11.27	-3.26	0.00	0.00	0.00	53.10

Segment Leq : 53.10 dBA

Total Leq All Segments: 53.10 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.63

(NIGHT) : 53.10

Filename: BE4T6.te Time Period: Day/Night 16/8 hours
 Description: BLDG E UNIT 4-6 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -45.00 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
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 54.20 + 0.00) = 54.20 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	0	0.48	69.03	0.00	-8.58	-6.24	0.00	0.00	0.00	54.20

Segment Leq : 54.20 dBA

Total Leq All Segments: 54.20 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 46.60 + 0.00) = 46.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	0	0.48	69.03	0.00	-8.58	-6.24	0.00	0.00	0.00	54.20

-45	0	0.48	61.43	0.00	-8.58	-6.24	0.00	0.00	0.00	46.60
-----	---	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 46.60 dBA

Total Leq All Segments: 46.60 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.20
(NIGHT): 46.60

Filename: BE7T9.te Time Period: Day/Night 16/8 hours
 Description: BLDG E UNIT 7-9 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -50.00 deg  0.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height     : 7.50 / 7.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

Results segment # 1: spratt road (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
-50	0	0.48	69.03	0.00	-7.74	-5.84	0.00	0.00	0.00	55.44

Segment Leq : 55.44 dBA

Total Leq All Segments: 55.44 dBA

Results segment # 1: spratt road (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
-50	0	0.48	69.03	0.00	-7.74	-5.84	0.00	0.00	0.00	55.44

-50	0	0.48	61.43	0.00	-7.74	-5.84	0.00	0.00	0.00	47.85
-----	---	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 47.85 dBA

Total Leq All Segments: 47.85 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.44
(NIGHT): 47.85

Filename: BE10T12.te Time Period: Day/Night 16/8 hours
 Description: BLDG E UNIT 10-12 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -55.00 deg  0.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface            : 1          (Absorptive ground surface)
Receiver source distance : 42.00 / 42.00 m
Receiver height     : 7.50 / 7.50 m
Topography         : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 56.92 + 0.00) = 56.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-55	0	0.48	69.03	0.00	-6.62	-5.49	0.00	0.00	0.00	56.92

Segment Leq : 56.92 dBA

Total Leq All Segments: 56.92 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 49.32 + 0.00) = 49.32 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-55	0	0.48	69.03	0.00	-6.62	-5.49	0.00	0.00	0.00	56.92

-55	0	0.48	61.43	0.00	-6.62	-5.49	0.00	0.00	0.00	49.32
-----	---	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 49.32 dBA

Total Leq All Segments: 49.32 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.92
(NIGHT): 49.32

Filename: BF1T3.te Time Period: Day/Night 16/8 hours
 Description: BLDG F UNIT 1-3 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    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): 12000
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: spratt road (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 : 20.00 / 20.00 m
Receiver height     : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 66.04 + 0.00) = 66.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	69.03	0.00	-1.85	-1.14	0.00	0.00	0.00	66.04

Segment Leq : 66.04 dBA

Total Leq All Segments: 66.04 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 58.44 + 0.00) = 58.44 dBA

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

-90	90	0.48	61.43	0.00	-1.85	-1.14	0.00	0.00	0.00	58.44
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 58.44 dBA

Total Leq All Segments: 58.44 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.04
(NIGHT): 58.44

Filename: BF4T6.te Time Period: Day/Night 16/8 hours
 Description: BLDG F UNIT 4-6 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    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): 12000
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: spratt road (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 : 20.00 / 20.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 66.04 + 0.00) = 66.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	69.03	0.00	-1.85	-1.14	0.00	0.00	0.00	66.04

Segment Leq : 66.04 dBA

Total Leq All Segments: 66.04 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 58.44 + 0.00) = 58.44 dBA

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

-90	90	0.48	61.43	0.00	-1.85	-1.14	0.00	0.00	0.00	58.44
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 58.44 dBA

Total Leq All Segments: 58.44 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.04
(NIGHT): 58.44

Filename: BF7T9.te Time Period: Day/Night 16/8 hours
 Description: BLDG F UNIT 7T9 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    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): 12000
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: spratt road (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 : 20.00 / 20.00 m
Receiver height     : 7.50 / 7.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 66.04 + 0.00) = 66.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	69.03	0.00	-1.85	-1.14	0.00	0.00	0.00	66.04

Segment Leq : 66.04 dBA

Total Leq All Segments: 66.04 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 58.44 + 0.00) = 58.44 dBA

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

-90	90	0.48	61.43	0.00	-1.85	-1.14	0.00	0.00	0.00	58.44
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 58.44 dBA

Total Leq All Segments: 58.44 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.04
(NIGHT): 58.44

Filename: BF10T12.te Time Period: Day/Night 16/8 hours
 Description: BLDG F UNIT 10-12 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    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): 12000
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: spratt road (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 : 21.00 / 20.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 65.73 + 0.00) = 65.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.48	69.03	0.00	-2.16	-1.14	0.00	0.00	0.00	65.73

Segment Leq : 65.73 dBA

Total Leq All Segments: 65.73 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 58.44 + 0.00) = 58.44 dBA

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

-90	90	0.48	61.43	0.00	-1.85	-1.14	0.00	0.00	0.00	58.44
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 58.44 dBA

Total Leq All Segments: 58.44 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.73
(NIGHT): 58.44

Filename: BG1T3.te Time Period: Day/Night 16/8 hours
 Description: BLDG G 1-3 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -10.00 deg   65.00 deg
Wood depth          : 0           (No woods.)
No of house rows    : 0 / 0
Surface             : 1           (Absorptive ground surface)
Receiver source distance : 63.00 / 63.00 m
Receiver height     : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 55.57 + 0.00) = 55.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	65	0.48	69.03	0.00	-9.22	-4.23	0.00	0.00	0.00	55.57

Segment Leq : 55.57 dBA

Total Leq All Segments: 55.57 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 47.97 + 0.00) = 47.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	65	0.48	69.03	0.00	-9.22	-4.23	0.00	0.00	0.00	47.97

-10	65	0.48	61.43	0.00	-9.22	-4.23	0.00	0.00	0.00	47.97
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 47.97 dBA

Total Leq All Segments: 47.97 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.57
(NIGHT): 47.97

Filename: BG4T6.te Time Period: Day/Night 16/8 hours
 Description: BLDG G 4-6 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -10.00 deg  70.00 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
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 56.64 + 0.00) = 56.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	70	0.48	69.03	0.00	-8.35	-4.03	0.00	0.00	0.00	56.64

Segment Leq : 56.64 dBA

Total Leq All Segments: 56.64 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 49.04 + 0.00) = 49.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	70	0.48	69.03	0.00	-8.35	-4.03	0.00	0.00	0.00	56.64

-10	70	0.48	61.43	0.00	-8.35	-4.03	0.00	0.00	0.00	49.04
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 49.04 dBA

Total Leq All Segments: 49.04 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.64
(NIGHT): 49.04

Filename: BG7T9.te Time Period: Day/Night 16/8 hours
 Description: BLDG G 7-9 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -15.00 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
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 56.75 + 0.00) = 56.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	75	0.48	69.03	0.00	-8.69	-3.58	0.00	0.00	0.00	56.75

Segment Leq : 56.75 dBA

Total Leq All Segments: 56.75 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 49.15 + 0.00) = 49.15 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	75	0.48	69.03	0.00	-8.69	-3.58	0.00	0.00	0.00	56.75

-15	75	0.48	61.43	0.00	-8.69	-3.58	0.00	0.00	0.00	49.15
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 49.15 dBA

Total Leq All Segments: 49.15 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.75
(NIGHT): 49.15

Filename: bg10t12.te Time Period: Day/Night 16/8 hours
 Description: BLDG G 10-12 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    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): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -15.00 deg   90.00 deg
Wood depth          : 0           (No woods.)
No of house rows    : 0 / 0
Surface             : 1           (Absorptive ground surface)
Receiver source distance : 40.00 / 40.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 59.42 + 0.00) = 59.42 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	90	0.48	69.03	0.00	-6.30	-3.30	0.00	0.00	0.00	59.42

Segment Leq : 59.42 dBA

Total Leq All Segments: 59.42 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 51.82 + 0.00) = 51.82 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	90	0.48	69.03	0.00	-6.30	-3.30	0.00	0.00	0.00	59.42

-15	90	0.48	61.43	0.00	-6.30	-3.30	0.00	0.00	0.00	51.82
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 51.82 dBA

Total Leq All Segments: 51.82 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.42
(NIGHT): 51.82

Filename: bhlt3.te Time Period: Day/Night 16/8 hours
 Description: bldg h 1-3 indoor

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    veh/TimePeriod  *
Posted speed limit   : 60 km/h
Road gradient        : 0 %
Road pavement        : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -10.00 deg   30.00 deg
Wood depth          : 0           (No woods.)
No of house rows    : 0 / 0
Surface             : 1           (Absorptive ground surface)
Receiver source distance : 106.00 / 106.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 49.85 + 0.00) = 49.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	30	0.48	69.03	0.00	-12.57	-6.61	0.00	0.00	0.00	49.85

Segment Leq : 49.85 dBA

Total Leq All Segments: 49.85 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 42.25 + 0.00) = 42.25 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	30	0.48	69.03	0.00	-12.57	-6.61	0.00	0.00	0.00	49.85

-10 30 0.48 61.43 0.00 -12.57 -6.61 0.00 0.00 0.00 42.25

Segment Leq : 42.25 dBA

Total Leq All Segments: 42.25 dBA

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod

Speed : 80 km/h

Data for Segment # 1: brt (day/night)

Angle1 Angle2 : -50.00 deg 60.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 66.00 / 66.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: brt (day)

Source height = 2.40 m

RT/Custom (0.00 + 57.34 + 0.00) = 57.34 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-50	60	0.45	69.16	-9.35	-2.47	0.00	0.00	0.00	57.34

Segment Leq : 57.34 dBA

Total Leq All Segments: 57.34 dBA

Results segment # 1: brt (night)

Source height = 2.40 m

RT/Custom (0.00 + 55.81 + 0.00) = 55.81 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-50	60	0.45	67.63	-9.35	-2.47	0.00	0.00	0.00	55.81

Segment Leq : 55.81 dBA

Total Leq All Segments: 55.81 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 58.05
(NIGHT): 56.00

Filename: bh4t6.te Time Period: Day/Night 16/8 hours
 Description: bldg h 4-6 indoor

Road data, segment # 1: spratt road (day/night)

 Car traffic volume : 9715/845 veh/TimePeriod *
 Medium truck volume : 773/67 veh/TimePeriod *
 Heavy truck volume : 552/48 veh/TimePeriod *
 Posted speed limit : 60 km/h
 Road gradient : 0 %
 Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 12000
 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: spratt road (day/night)

 Angle1 Angle2 : -10.00 deg 35.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 99.00 / 99.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

Results segment # 1: spratt road (day)

 Source height = 1.50 m

ROAD (0.00 + 50.77 + 0.00) = 50.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	35	0.48	69.03	0.00	-12.13	-6.13	0.00	0.00	0.00	50.77

 Segment Leq : 50.77 dBA

Total Leq All Segments: 50.77 dBA

Results segment # 1: spratt road (night)

 Source height = 1.50 m

ROAD (0.00 + 43.17 + 0.00) = 43.17 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	35	0.48	69.03	0.00	-12.13	-6.13	0.00	0.00	0.00	50.77

-10 35 0.48 61.43 0.00 -12.13 -6.13 0.00 0.00 0.00 43.17

Segment Leq : 43.17 dBA

Total Leq All Segments: 43.17 dBA

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod

Speed : 80 km/h

Data for Segment # 1: brt (day/night)

Angle1 Angle2 : -45.00 deg 60.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 70.00 / 70.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: brt (day)

Source height = 2.40 m

RT/Custom (0.00 + 56.79 + 0.00) = 56.79 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	60	0.45	69.16	-9.72	-2.66	0.00	0.00	0.00	56.79

Segment Leq : 56.79 dBA

Total Leq All Segments: 56.79 dBA

Results segment # 1: brt (night)

Source height = 2.40 m

RT/Custom (0.00 + 55.25 + 0.00) = 55.25 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	60	0.45	67.63	-9.72	-2.66	0.00	0.00	0.00	55.25

Segment Leq : 55.25 dBA

Total Leq All Segments: 55.25 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.76
(NIGHT): 55.51

Filename: bh7t9.te Time Period: Day/Night 16/8 hours
 Description: bldg h 7-9 indoor

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    veh/TimePeriod  *
Posted speed limit   : 60 km/h
Road gradient        : 0 %
Road pavement       : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -10.00 deg  40.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 91.00 / 91.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 51.73 + 0.00) = 51.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	40	0.48	69.03	0.00	-11.59	-5.71	0.00	0.00	0.00	51.73

Segment Leq : 51.73 dBA

Total Leq All Segments: 51.73 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 44.13 + 0.00) = 44.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	40	0.48	69.03	0.00	-11.59	-5.71	0.00	0.00	0.00	51.73

-10 40 0.48 61.43 0.00 -11.59 -5.71 0.00 0.00 0.00 44.13

Segment Leq : 44.13 dBA

Total Leq All Segments: 44.13 dBA

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod

Speed : 80 km/h

Data for Segment # 1: brt (day/night)

Angle1 Angle2 : -40.00 deg 60.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 74.00 / 74.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: brt (day)

Source height = 2.40 m

RT/Custom (0.00 + 56.24 + 0.00) = 56.24 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-40	60	0.45	69.16	-10.07	-2.85	0.00	0.00	0.00	56.24

Segment Leq : 56.24 dBA

Total Leq All Segments: 56.24 dBA

Results segment # 1: brt (night)

Source height = 2.40 m

RT/Custom (0.00 + 54.71 + 0.00) = 54.71 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-40	60	0.45	67.63	-10.07	-2.85	0.00	0.00	0.00	54.71

Segment Leq : 54.71 dBA

Total Leq All Segments: 54.71 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.56
(NIGHT): 55.07

Filename: bh10t12.te Time Period: Day/Night 16/8 hours
 Description: bldg h 10-12 * indoor

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    veh/TimePeriod  *
Posted speed limit   : 60 km/h
Road gradient        : 0 %
Road pavement        : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -10.00 deg   55.00 deg
Wood depth          : 0           (No woods.)
No of house rows    : 0 / 0
Surface             : 1           (Absorptive ground surface)
Receiver source distance : 83.00 / 83.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

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
-10	55	0.48	69.03	0.00	-11.00	-4.71	0.00	0.00	0.00	53.32

Segment Leq : 53.32 dBA

Total Leq All Segments: 53.32 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 45.72 + 0.00) = 45.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	55	0.48	69.03	0.00	-11.00	-4.71	0.00	0.00	0.00	45.72

-10 55 0.48 61.43 0.00 -11.00 -4.71 0.00 0.00 0.00 45.72

Segment Leq : 45.72 dBA

Total Leq All Segments: 45.72 dBA

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod

Speed : 80 km/h

Data for Segment # 1: brt (day/night)

Angle1 Angle2 : -20.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 78.00 / 78.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: brt (day)

Source height = 2.40 m

RT/Custom (0.00 + 55.74 + 0.00) = 55.74 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	90	0.45	69.16	-10.40	-3.02	0.00	0.00	0.00	55.74

Segment Leq : 55.74 dBA

Total Leq All Segments: 55.74 dBA

Results segment # 1: brt (night)

Source height = 2.40 m

RT/Custom (0.00 + 54.21 + 0.00) = 54.21 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	90	0.45	67.63	-10.40	-3.02	0.00	0.00	0.00	54.21

Segment Leq : 54.21 dBA

Total Leq All Segments: 54.21 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.71
(NIGHT): 54.79

Filename: bilt3.te Time Period: Day/Night 16/8 hours
 Description: BLDG I 1-3 INDOOR

Road data, segment # 1: spratt road (day/night)

```
-----
Car traffic volume   : 9715/845   veh/TimePeriod  *
Medium truck volume  : 773/67    veh/TimePeriod  *
Heavy truck volume   : 552/48    veh/TimePeriod  *
Posted speed limit   : 60 km/h
Road gradient        : 0 %
Road pavement        : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 12000
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: spratt road (day/night)

```
-----
Angle1  Angle2      : -50.00 deg   90.00 deg
Wood depth          : 0           (No woods.)
No of house rows    : 0 / 0
Surface             : 1           (Absorptive ground surface)
Receiver source distance : 61.00 / 61.00 m
Receiver height      : 7.50 / 7.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: spratt road (day)

Source height = 1.50 m

ROAD (0.00 + 58.11 + 0.00) = 58.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-50	90	0.48	69.03	0.00	-9.02	-1.90	0.00	0.00	0.00	58.11

Segment Leq : 58.11 dBA

Total Leq All Segments: 58.11 dBA

Results segment # 1: spratt road (night)

Source height = 1.50 m

ROAD (0.00 + 50.51 + 0.00) = 50.51 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-50	90	0.48	69.03	0.00	-9.02	-1.90	0.00	0.00	0.00	58.11

-50 90 0.48 61.43 0.00 -9.02 -1.90 0.00 0.00 0.00 50.51

Segment Leq : 50.51 dBA

Total Leq All Segments: 50.51 dBA

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod

Speed : 80 km/h

Data for Segment # 1: brt (day/night)

Angle1 Angle2 : -90.00 deg -35.00 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

Results segment # 1: brt (day)

Source height = 2.40 m

RT/Custom (0.00 + 54.22 + 0.00) = 54.22 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-35	0.45	69.16	-7.97	-6.98	0.00	0.00	0.00	54.22

Segment Leq : 54.22 dBA

Total Leq All Segments: 54.22 dBA

Results segment # 1: brt (night)

Source height = 2.40 m

RT/Custom (0.00 + 52.68 + 0.00) = 52.68 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-35	0.45	67.63	-7.97	-6.98	0.00	0.00	0.00	52.68

Segment Leq : 52.68 dBA

Total Leq All Segments: 52.68 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.60
(NIGHT): 54.74

Filename: bi4t6.te Time Period: Day/Night 16/8 hours
 Description: BLDG I 7-9 INDOOR

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod
 Speed : 80 km/h

Data for Segment # 1: brt (day/night)

 Angle1 Angle2 : -20.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 42.00 / 42.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

Results segment # 1: brt (day)

 Source height = 2.40 m

RT/Custom (0.00 + 59.65 + 0.00) = 59.65 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	90	0.45	69.16	-6.50	-3.02	0.00	0.00	0.00	59.65

Segment Leq : 59.65 dBA

Total Leq All Segments: 59.65 dBA

Results segment # 1: brt (night)

 Source height = 2.40 m

RT/Custom (0.00 + 58.12 + 0.00) = 58.12 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	90	0.45	67.63	-6.50	-3.02	0.00	0.00	0.00	58.12

Segment Leq : 58.12 dBA

Total Leq All Segments: 58.12 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.65

(NIGHT) : 58.12

Filename: bi7t9.te Time Period: Day/Night 16/8 hours
 Description: BLDG I 7-9 INDOOR

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod
 Speed : 80 km/h

Data for Segment # 1: brt (day/night)

Angle1 Angle2 : -20.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 35.00 / 35.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

Results segment # 1: brt (day)

Source height = 2.40 m

RT/Custom (0.00 + 60.80 + 0.00) = 60.80 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	90	0.45	69.16	-5.35	-3.02	0.00	0.00	0.00	60.80

Segment Leq : 60.80 dBA

Total Leq All Segments: 60.80 dBA

Results segment # 1: brt (night)

Source height = 2.40 m

RT/Custom (0.00 + 59.27 + 0.00) = 59.27 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	90	0.45	67.63	-5.35	-3.02	0.00	0.00	0.00	59.27

Segment Leq : 59.27 dBA

Total Leq All Segments: 59.27 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 60.80

(NIGHT) : 59.27

0 90 0.48 61.43 0.00 -10.22 -4.15 0.00 0.00 0.00 47.06

Segment Leq : 47.06 dBA

Total Leq All Segments: 47.06 dBA

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod

Speed : 80 km/h

Data for Segment # 1: brt (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 : 28.00 / 28.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: brt (day)

Source height = 2.40 m

RT/Custom (0.00 + 64.14 + 0.00) = 64.14 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	69.16	-3.94	-1.09	0.00	0.00	0.00	64.14

Segment Leq : 64.14 dBA

Total Leq All Segments: 64.14 dBA

Results segment # 1: brt (night)

Source height = 2.40 m

RT/Custom (0.00 + 62.61 + 0.00) = 62.61 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	67.63	-3.94	-1.09	0.00	0.00	0.00	62.61

Segment Leq : 62.61 dBA

Total Leq All Segments: 62.61 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.60
(NIGHT): 62.73

Noise Calculations – Outdoor Living Area (OLA)

Filename: ola.te Time Period: Day/Night 16/8 hours
 Description: OLA Share amenity area

RT/Custom data, segment # 1: brt (day/night)

1 - Custom (87.0 dBA):

Traffic volume : 444/156 veh/TimePeriod
 Speed : 80 km/h

Data for Segment # 1: brt (day/night)

Angle1 Angle2 : -60.00 deg 20.00 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 : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

Results segment # 1: brt (day)

Source height = 2.40 m

RT/Custom (0.00 + 54.05 + 0.00) = 54.05 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-60	20	0.63	69.16	-11.17	-3.94	0.00	0.00	0.00	54.05

Segment Leq : 54.05 dBA

Total Leq All Segments: 54.05 dBA

Results segment # 1: brt (night)

Source height = 2.40 m

RT/Custom (0.00 + 52.52 + 0.00) = 52.52 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-60	20	0.63	67.63	-11.17	-3.94	0.00	0.00	0.00	52.52

Segment Leq : 52.52 dBA

Total Leq All Segments: 52.52 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.05

(NIGHT) : 52.52

Appendix C

Architectural Drawings

IRON VALLEY II - TERRACE HOMES

5331 FERNBANK ROAD, OTTAWA, ON

RLA PROJECT #: 2033

ISSUED FOR REVISED SITE PLAN CONTROL APP.

251117

ARCHITECTURAL

RLA ARCHITECTURE
56 BEECH ST
OTTAWA, ON K1S 3J6
613-724-9932

ARCHITECTURAL	
Sheet Number	Sheet Name

ELECTRICAL

QM&E ENGINEERING
9 GURDWARA RD, SUITE 200
NEPEAN K2E 7X6
(613) 366-4763

ELECTRICAL	
Sheet Number	Sheet Name
E001	SHEET TITLE

MECHANICAL

QM&E ENGINEERING
9 GURDWARA RD, SUITE 200
NEPEAN K2E 7X6
(613) 366-4763

MECHANICAL	
Sheet Number	Sheet Name
M.01	SHEET TITLE

STRUCTURAL

ADJELEIAN ALLEN RUBELI LTD.
75 ALBERT STREET, SUITE 1005
OTTAWA K1P 5E7
(613) 232-5786

STRUCTURAL	
Sheet Number	Sheet Name
S001	SHEET TITLE

CIVIL

COMPANY NAME
ADDRESS
CITY POSTAL CODE
PHONE NUMBER

CIVIL	
Sheet Number	Sheet Name
EC-1	EROSION CONTROL PLAN
EX-1	EXISTING CONDITIONS PLAN
GP-1	GRADING PLAN
SSP-1	SITE SERVING PLAN
SWM-1	STORMWATER MANAGEMENT PLAN

LANDSCAPE

COMPANY NAME
ADDRESS
CITY POSTAL CODE
PHONE NUMBER

LANDSCAPE	
Sheet Number	Sheet Name
L001	SHEET TITLE



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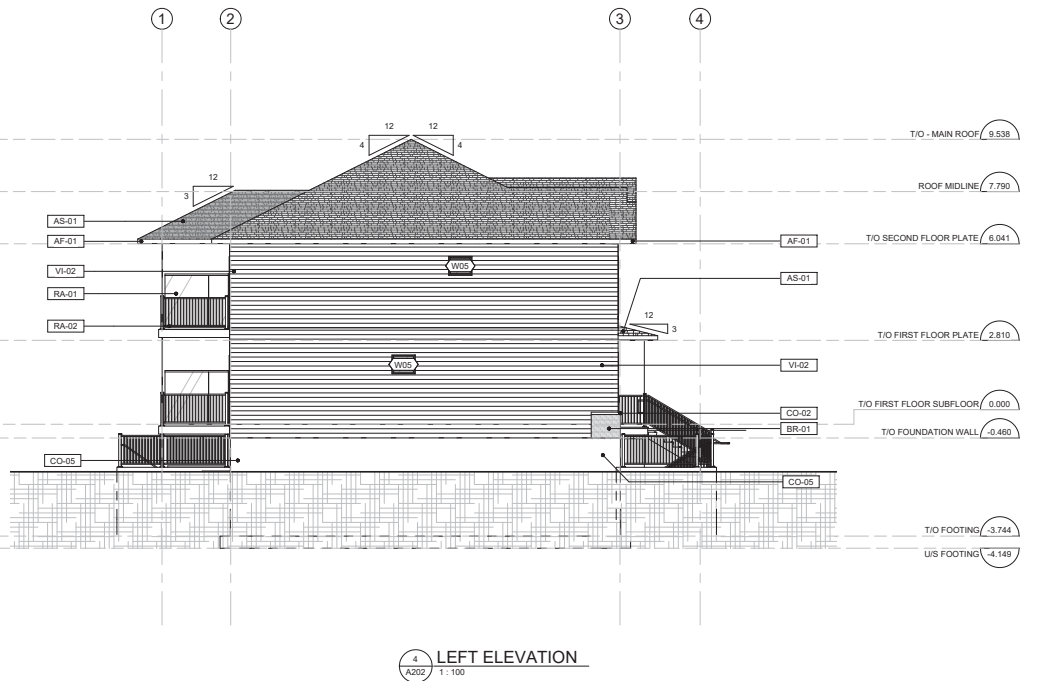
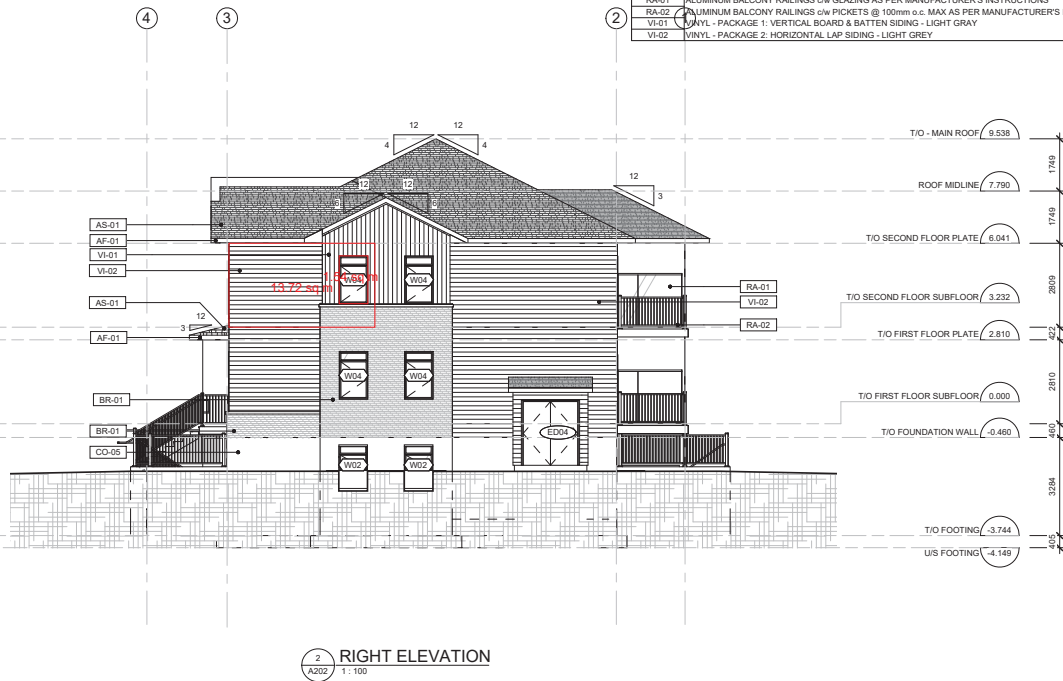
2 GFA SECOND FLOOR
A153 1 : 360

PLOT DATE: 2025-11-27 1:56:35 PM

PLOT DATE: 2025-11-27 1:56:35 PM

PLOT DATE: 2025-11-27 1:56:35 PM

PLOT DATE: 2025-11-27 1:56:35 PM



MATERIAL KEYNOTE LEGEND	
1	CONCRETE FOUNDATION WALL - DAMPROOFING TO EXTEND DOWN AND OVER FOOTINGS, PARING TO EXTEND 150mm BELOW GRADE
2	CLOTH COVERED DRAINAGE TILE @ PERIMETER OF FOUNDATION WALL c/w 150mm MIN. GRANULAR COVER - ALL EXTERIOR CONNECTIONS TO BE COORDINATED WITH AND CONFIRMED BY CIVIL
3	STEEL ANCHOR BOLTS EMBEDDED IN CONCRETE FOUNDATION WALL THROUGH SILL PLATE
4	TYVEK RIM BOARD WRAP c/w BATT INSULATION
AF-01	ALUMINUM FASCIA - DARK GREY
AS-01	ASPHALT SHINGLES - DARK GREY
BR-01	MASONRY - PACKAGE 1: APRISCAFT CAMBRIDGE RENAISSANCE - BIRCHBARK
CO-02	PRECAST SILL
CO-05	PARGING
RA-01	ALUMINUM BALCONY RAILINGS c/w GLAZING AS PER MANUFACTURER'S INSTRUCTIONS
RA-02	MINIMUM BALCONY RAILINGS c/w PICKETS @ 100mm o.c. MAX AS PER MANUFACTURER'S INSTRUCTIONS
VI-01	VINYL - PACKAGE 1: VERTICAL BOARD & BATTEN SIDING - LIGHT GRAY
VI-02	VINYL - PACKAGE 2: HORIZONTAL LAP SIDING - LIGHT GRAY

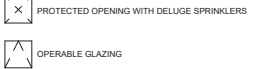
IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND TO REPORT ALL ERRORS AND/OR OMISSIONS TO THE ARCHITECT.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.

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

DO NOT SCALE DRAWINGS.

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

REVISIONS:

ARCHITECT SEAL:	NORTH ARROW:
-----------------	--------------



ARCHITECT:

rla/architecture

56 Beech Street, Ottawa, Ontario K1S 3J6
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PROJECT TITLE:

IRON VALLEY II - TERRACE HOMES

5331 FERNBANK ROAD, OTTAWA, ON

SHEET TITLE:

ELEVATIONS - BLACK & WHITE

DRAWN: JWD	CHECKED: VP
SCALE: 1:100	SHEET No:
PROJECT No: 2033	A202

Appendix D

STC Calculations

Daytime Living Space - East Façade (Building 'F' 3rd Storey)

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

1.0	Free field sound level	<u>66.04</u> dBA	Noise source
	Correction for reflections	<u>3</u> dBA	Road ▼
	Outdoor sound level	<u>69.04</u> dBA	Indoor Quarters
	Indoor sound level (Daytime)	<u>45</u> dBA	Living ▼
	Required Noise Reduction (NR)	<u>24.04</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>24.04</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>24</u> dB
7.0	Term C ₂ : Subtract the Required NR from the Noise Reduction for this component		<u>19</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>24.04</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>4.2</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>21</u>

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

Master Bedroom - Master Bedroom - East Façade (Building 'F' 3rd Storey)

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

1.0	Free field sound level	62.74	dBA	Noise source	
	Correction for reflections	3	dBA	Road	▼
	Outdoor sound level	65.74	dBA	Indoor Quarters	
	Indoor sound level (Night time)	40	dBA	Sleeping	▼
	Required Noise Reduction (NR)	25.74	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	25.74 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	17 m ²		43.58824 % of floor area	
	Component Area	7.41 m ²			
	Room absorption category	Intermediate	▼	C ₃ from Table 7.9	-5 dB
				Correction	5 dB
5.0	Noise reduction if only this component transmits sound				38 dB
6.0	Required noise reduction (from Step 1)				26 dB
7.0	Term C ₂ : Subtract the Required NR from the Noise Reduction for this component				12 dB
8.0	Determine from Table 7.8 the corresponding value of total transmitted sound energy				6 %

	Component:	Window	▼	After step 2	25.74 dB
9.0	Transmits	94 % of total sound energy		C ₂ from Table 7.8	0 dB
10.0	Room floor area	17 m ²		25.11765 % of floor area	
	Component Area	4.27 m ²			
	Room absorption category	Intermediate	▼	C ₃ from Table 7.9	-5 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	28

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