REPORT
Project: 122764-6.2.2.1

ENVIRONMENTAL NOISE IMPACT ASSESSMENT
ORLEANS GARDENS RESIDENTIAL
1615 ORLEANS BOULEVARD

Prepared for North American Development Group
by IBI GROUP

February 2023

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1 Introduction

Arcadis IBI Group was retained by North American Properties to conduct an Environmental Noise Impact Assessment in support of a Site Plan Control application for a residential development located at 1615 Orléans Boulevard in the Orléans Community of Ottawa, Ontario. This development would accommodate low- to mid-rise residential uses in the northern portion of the existing Orleans Gardens Shopping Centre.

The proposed development consists of 60 residential dwelling units arranged in three (3), three-storey blocks and one (1) four-storey block and is generally bound by existing commercial uses to the west and south, residential dwellings to the east and Jeanne d'Arc Boulevard to the north.

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 Jeanne d'Arc Boulevard and Orléans Boulevard. All other roads within the vicinity of the subject development are identified as local roads and therefore were not analysed as part of this study.

The subject property is located beyond the limits of the Airport Vicinity Development Zone (AVDZ), as shown on Schedule C14 of the 2022 Official Plan. As such, aircraft noise from the Ottawa International Airport was not 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 are taken 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:

- 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 three- and four-storey stacked townhome blocks. For the purpose of assessing the indoor noise in this study, the daytime noise levels were observed at 1.5 metres above the ground ('lower' units) or 4.5 metres above the ground ('upper' units), while the nighttime noise levels for bedrooms was calculated with respect to the critical top floor bedrooms.

As per NPC-300 C7.1.3, if the daytime outdoor sound levels exceed 65 dBA at the living room window during the daytime or if the nighttime sound levels exceed 60 dBA at the bedroom window, then the building must be compliant with the Ontario Building Code. Should the outdoor sound levels exceed this criterion, then building component (walls, windows, etc.) must be designed to achieve the indoor sound level criteria.

In accordance with NPC-300 C7.1.2.1 and C7.1.2.2, if the outdoor noise levels at the living room 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 is required along with forced air heating with a provision for central air conditioning is required. Should the outdoor sound levels exceed the criteria, central air conditioning is mandatory, 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.

If the Leq sound level is less than or equal to the above criteria, then no further action is required by the developer. If the sound level exceeds the criteria by less than 5 dBA then the developer 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 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 discussed previously, the major sources of road noise impacting the site are expected to be limited to traffic flows on Jeanne d'Arc Boulevard and Orléans Boulevard, both of which presently exist as four-lane, divided urban arterial roads with posted speed limits of 60km/h adjacent to the subject lands.

According to Schedule C16 of the 2022 Official Plan, each road has a right-of-way protection of 37.5 metres within the vicinity of the subject site and there are currently no plans for improvement of either roadway.

Table 3.1 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 3.1: TRAFFIC AND ROAD DATA SUMMARY

	JEANNE D'ARC & ORLEANS BOULEVARD (4-UAD)
Annual Average Daily Traffic (AADT)	35,000
Posted Speed Limit (km/h)	60
% Medium Trucks	7%
% Heavy Trucks	5%
% Daytime Traffic	92%

3.2 Calculation Methods

The roadway noise analysis for this study was conducted using STAMSON v5.04, an industry-standard software program developed by the Ontario Ministry of the Environment (MOE). Detailed results of this analysis are provided in **Appendix A**.

Unattenuated daytime and nighttime noise levels at the building face were calculated to determine indoor sound levels, the results of which are presented in **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 both Jeanne D'Arc Boulevard and Orleans Boulevard were modelled as four-lane divided roadways, the noise levels are calculated separately for the opposing vehicular lanes of each road and then combined.

As indicated on **Noise Plan – Drawing No. 122764-N1**, there is an Outdoor Amenity Area which meets the criteria for an 'outdoor living area', as defined in the ENC Guidelines. This location, however, will be well screened from Jeanne D'Arc Boulevard and Orleans Boulevard by the proposed stacked townhome blocks and the existing commercial building immediately to the west (to remain). As such, the noise impacts across will be anticipated to remain below 55dBA across this amenity space. Further, the review of any proposed above-grade terraces are not required as part of this study due to the presence of the Shared Amenity Area which is expected to serve as the primary outdoor living area for all residents within the proposed development.

TABLE 3.2: UNATTENUATED NOISE LEVELS AT BUILDING FACE

LOCATION		ROADWAY	SOURCE - RECEIVER DISTANCE (m)[2]	SEGMENT ANGLES		INDOOR NOISE LEVELS (dBA)	
LOT/BLOCK	DESCRIPTION [1]			LEFT	RIGHT	DAYTIME	NIGHTTIME
Block a	Unit 1L	Jeanne D'Arc EB	28.5	-90.00	90.00	67.23	60.66
Block a	Unit 1L	Jeanne D'Arc WB	40.5	-90.00	90.00		
Block a	Unit 1L	Orleans NB	75.5	-40.00	90.00		
Block a	Unit 1L	Orleans SB	87.5	-40.00	90.00		
Block a	Unit 2U	Jeanne D'Arc EB	27.5	-90.00	90.00	67.58	60.48
Block a	Unit 2U	Jeanne D'Arc WB	39.5	-90.00	90.00		
Block a	Unit 2U	Orleans NB	85.5	0.00	90.00		
Block a	Unit 2U	Orleans SB	97.5	0.00	90.00		
Block a	Unit 3L	Jeanne D'Arc EB	37.0	-90.00	-5.00	63.29	56.98
Block a	Unit 3L	Jeanne D'Arc WB	49.0	-90.00	-5.00		
Block a	Unit 3L	Orleans NB	75.5	-30.00	90.00		
Block a	Unit 3L	Orleans SB	87.5	-30.00	90.00		
Block a	Unit 4u	Jeanne D'Arc EB	34.0	-5.00	70.00	62.74	55.61
Block a	Unit 4u	Jeanne D'Arc WB	46.0	-5.00	70.00		
Block a	Unit 10u	Jeanne D'Arc EB	54.5	-10.00	15.00	55.66	48.60
Block a	Unit 10u	Jeanne D'Arc WB	66.5	-10.00	15.00		
Block a	Unit 12u	Jeanne D'Arc EB	61.5	-10.00	10.00	53.93	46.92
Block a	Unit 12u	Jeanne D'Arc WB	73.5	-10.00	10.00		
Block a	Unit 15L	Jeanne D'Arc EB	74.5	-60.00	-5.00	57.98	52.02
Block a	Unit 15L	Jeanne D'Arc WB	86.5	-60.00	-5.00		
Block a	Unit 15L	Orleans NB	75.5	35.00	90.00		
Block a	Unit 15L	Orleans SB	87.5	35.00	90.00		
Block b	Unit 3U	Jeanne D'Arc EB	37.0	-45.00	-5.00	59.84	53.12
Block b	Unit 3U	Jeanne D'Arc WB	49.0	-45.00	-5.00		
Block b	Unit 7U	Jeanne D'Arc EB	51.0	-25.00	-5.00	55.03	48.49
Block b	Unit 7U	Jeanne D'Arc WB	63.0	-25.00	-5.00		
Block b	Unit 8U	Jeanne D'Arc EB	49.0	-10.00	20.00	57.10	50.51
Block b	Unit 8U	Jeanne D'Arc WB	61.0	-10.00	20.00		
Block b	Unit 9U	Jeanne D'Arc EB	58.0	-20.00	-5.00	53.00	46.55
Block b	Unit 9U	Jeanne D'Arc WB	70.0	-20.00	-5.00		
Block b	Unit 10U	Jeanne D'Arc EB	65.0	-10.00	15.00	54.54	48.16
Block b	Unit 10U	Jeanne D'Arc WB	77.0	-10.00	15.00		
Block c	Unit 4L	Jeanne D'Arc EB	36.0	-15.00	85.00	62.85	56.27
Block c	Unit 4L	Jeanne D'Arc WB	48.0	-15.00	85.00		
Block c	Unit 5U	Jeanne D'Arc EB	45.0	-35.00	-5.00	57.49	50.39
Block c	Unit 5U	Jeanne D'Arc WB	57.0	-35.00	-5.00		
Block c	Unit 7U	Jeanne D'Arc EB	52.0	-25.00	-5.00	54.91	47.85
Block c	Unit 7U	Jeanne D'Arc WB	64.0	-25.00	-5.00		
Block c	Unit 14L	Jeanne D'Arc EB	70.5	-10.00	35.00	55.82	49.52
Block c	Unit 14L	Jeanne D'Arc WB	82.5	-10.00	35.00		
Block c	Unit 16L	Jeanne D'Arc EB	77.5	-10.00	30.00	54.71	48.48
Block c	Unit 16L	Jeanne D'Arc WB	89.5	-10.00	30.00		
Block d	Unit 1L	Jeanne D'Arc EB	31.0	-85.00	90.00	65.95	59.32
Block d	Unit 1L	Jeanne D'Arc WB	43.0	-85.00	90.00		
Block d	Unit 2U	Jeanne D'Arc EB	30.0	-90.00	90.00	66.95	59.54

LOCATION		ROADWAY	SOURCE - RECEIVER DISTANCE (m)[2]	SEGMENT ANGLES		INDOOR NOISE LEVELS (dBA)	
LOT/BLOCK	DESCRIPTION [1]			LEFT	RIGHT	DAYTIME	NIGHTTIME
Block d	Unit 2U	Jeanne D'Arc WB	42.0	-90.00	90.00		
Block d	Unit 3L	Jeanne D'Arc EB	38.5	-70.00	0.00	61.12	54.54
Block d	Unit 3L	Jeanne D'Arc WB	50.5	-70.00	0.00		
Block d	Unit 4U	Jeanne D'Arc EB	36.5	0.00	70.00	61.96	54.85
Block d	Unit 4U	Jeanne D'Arc WB	48.5	0.00	70.00		
Block d	Unit 8U	Jeanne D'Arc EB	50.5	0.00	40.00	57.99	500.94
Block d	Unit 8U	Jeanne D'Arc WB	62.5	0.00	40.00		
Block d	Unit 10U	Jeanne D'Arc EB	57.5	0.00	35.00	56.64	49.63
Block d	Unit 10U	Jeanne D'Arc WB	69.5	0.00	35.00		
Block d	Unit 11L	Jeanne D'Arc EB	66.0	-30.00	10.00	55.80	49.44
Block d	Unit 11L	Jeanne D'Arc WB	78.0	-30.00	10.00		
Block d	Unit 12U	Jeanne D'Arc EB	64.5	0.00	30.00	55.29	48.31
Block d	Unit 12U	Jeanne D'Arc WB	76.5	0.00	30.00		

Notes:

[1] 'L' following unit number refers to a 'Lower-Level' unit with the kitchen on the ground floor.
'U' following a unit number refers to an 'Upper-Level' unit with the kitchen on the second floor.

[2] For Jeanne D'Arc Boulevard and Orleans Boulevard, opposing vehicular travel lanes are shown separately.

As indicated in **Table 3.2** above, there are numerous locations which exceed the noise criteria at the building face, therefore abatement measures will be reviewed for these dwelling units in subsequent sections of this study.

4 Abatement Measures

4.1 Indoor Sound Levels

As indicated previously in the indoor noise analysis summarized in Section 2.2.1, dwelling units with exterior north-facing exterior walls with the highest exposure to traffic noise from the arterial road network were calculated to have daytime noise levels above 65 dBA (daytime) or 60 dBA (nighttime). 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 which face east or west or and do not have exterior windows facing north directly towards Jeanne D'Arc Boulevard or the intersection of Jeanne D'Arc Boulevard & Orleans Boulevard will experience only indirect noise exposure from the surrounding arterial road network. For 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 Building Components

Based on the results of the indoor noise assessment in **Table 3.2**, 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. Architectural plans for Building 'A' and 'H' were obtained for the STC evaluation carried out as part of this study. The kitchen/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 'Master Bedroom' was used to calculate the STC rating during the nighttime, as these bedrooms featured windows on multiple facades and are located in the upper level of each dwelling unit.

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 northern facades of Building 'A' to 'D'. 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 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 and a critical STC value of 26 was determined to be required for the northern façade of each building.

Sample architectural plan and profile drawings and STC calculations for the northern facades of Buildings 'A' to 'D', with the highest exposure to traffic noise from Jeanne D'Arc Boulevard and the intersection of Jeanne D'Arc Boulevard & Orleans Boulevard, are included in **Appendix B** and **Appendix C**, respectively.

TABLE 4.1: REQUIRED STC RATINGS FOR GLAZED WINDOWS & DOORS

DWELLING UNIT	LEVEL	ROOM TYPE	REQUIRED STC RATING
			WINDOWS & GLAZED DOORS
Building 'A', 'B' 'C' & 'D' – North Façade of Upper Floor Units	2nd Floor[1]	Living Room	26
	3rd or 4th Floor	Bedroom	25

Notes: [1] Upper Floor units with the living/dining room on the 2nd storey represent the critical case which was used to determine the STC rating under daytime conditions.

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. 122764-N1** and listed below:

Type 'C' Block 'A' – Units 3 to 11, 13 & 15
Block 'B' – Units 3 to 8
Block 'C' – Units 3 to 6, 8, 10, 12 & 14
Block 'D' – Units 3 to 12

Type 'D' Block 'A' – Units 1 & 2
Block 'B' – Units 1 & 2
Block 'C' – Units 1 & 2
Block 'D' – Units 1 & 2

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 identified in Section 5.1 requiring a Type 'C' warning clause shall have a forced air heating system sized to accommodate a central air conditioning system, while all dwelling units requiring a Type 'D' warning clause 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 Orleans Gardens residential development, located within the Orleans Community at 1615 Orleans Boulevard, 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. All dwelling units with direct exposure to Jeanne D'Arc Boulevard or the intersection of Jeanne D'Arc & Orleans will require windows and glazed doors will require a minimum Sound Transmission Class (STC) rating of 26.

7 Professional Authorization

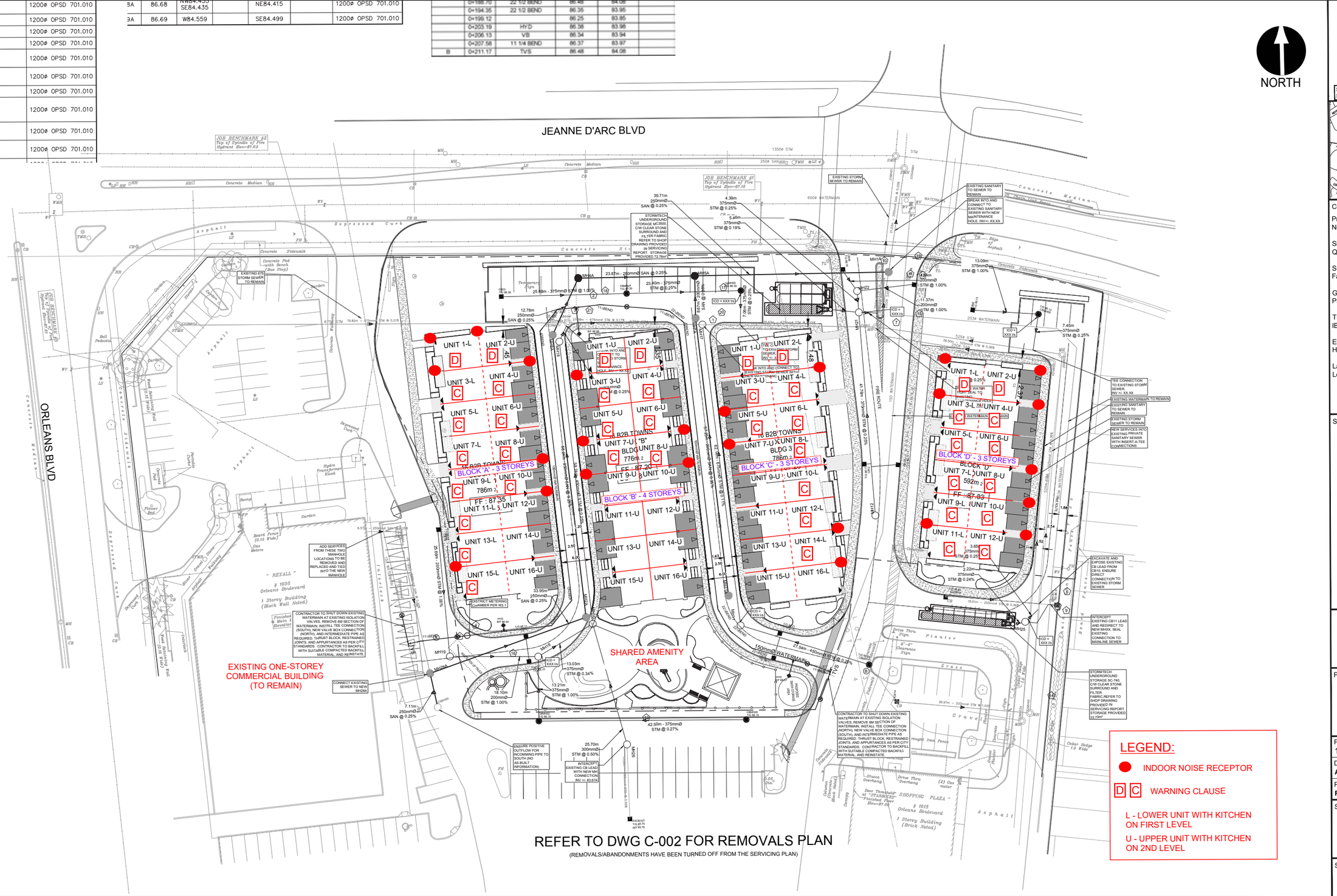
Prepared by:

Ben Pascolo-Neveu, P.Eng.

0	86.68	SW83.168 SE83.213		N83.063		1200ø OPSD 701.010
11	86.53	E82.740		N82.485		1200ø OPSD 701.010
12	86.39			N84.234		1200ø OPSD 701.010
16	86.65	S82.917		N82.434		1200ø OPSD 701.010
17	86.60	S82.415 W82.375		E82.355		1200ø OPSD 701.010
18	86.19	W83.417 S83.242		NE83.212		1200ø OPSD 701.010
19	86.53	N83.658		E83.598		1200ø OPSD 701.010
21	86.28	S84.129 W82.029 N82.069		E82.009		1200ø OPSD 701.010
22	86.25	E84.665 NW84.705		S82.080		1200ø OPSD 701.010
25	86.54	SW82.540		E82.609 NE82.520		1200ø OPSD 701.010

BA	86.68	NW84.435 SE84.435		NE84.415		1200ø OPSD 701.010
BA	86.69	W84.559		SE84.499		1200ø OPSD 701.010

	0+186.70	22 1/2 BEND	86.48	84.06	
	0+194.35	22 1/2 BEND	86.35	83.95	
	0+199.12		86.25	83.85	
	0+203.19	HYD	86.38	83.98	
	0+206.13	VB	86.34	83.94	
	0+207.58	11 1/4 BEND	86.37	83.97	
B	0+211.17	TVS	86.48	84.08	



REFER TO DWG C-002 FOR REMOVALS PLAN

(REMOVALS/ABANDONMENTS HAVE BEEN TURNED OFF FROM THE SERVICING PLAN)

IBI

Orleans Gardens Residential
Environmental Noise Impact Assessment

Noise Plan - Drawing No. 122764-N1

PROJECT No. 122764

SCALE: 0m 10m 20m

Appendix A –
STAMSON Noise Calculations

Indoor Noise Calculations

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:40:52
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau1l.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (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 : 28.50 / 28.50 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (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 : 40.50 / 40.50 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

```
Reference angle           :   0.00


Road data, segment # 3: Orleans 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: Orleans NB (day/night)
--------------------------------------------
Angle1   Angle2           : -40.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  75.50 / 75.50  m
Receiver height           :   1.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Road data, segment # 4: Orleans 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 # 4: Orleans SB (day/night)
--------------------------------------------
Angle1   Angle2           : -40.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  87.50 / 87.50  m
Receiver height           :   1.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Results segment # 1: Jeanne D'Arc EB (day)
```

Source height = 1.50 m

ROAD (0.00 + 64.58 + 0.00) = 64.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	70.67	0.00	-4.63	-1.46	0.00	0.00	0.00	64.58

Segment Leq : 64.58 dBA

Results segment # 2: Jeanne D'Arc WB (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
-90	90	0.66	70.67	0.00	-7.16	-1.46	0.00	0.00	0.00	62.05

Segment Leq : 62.05 dBA

Results segment # 3: Orleans NB (day)

Source height = 1.50 m

ROAD (0.00 + 56.56 + 0.00) = 56.56 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-40	90	0.66	70.67	0.00	-11.65	-2.46	0.00	0.00	0.00	56.56

Segment Leq : 56.56 dBA

Results segment # 4: Orleans SB (day)

Source height = 1.50 m

ROAD (0.00 + 55.49 + 0.00) = 55.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-40	90	0.66	70.67	0.00	-12.71	-2.46	0.00	0.00	0.00	55.49

Segment Leq : 55.49 dBA

Total Leq All Segments: 67.23 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 57.81 + 0.00) = 57.81 dBA

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

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	-4.13	-1.14	0.00	0.00	0.00	57.81

Segment Leq : 57.81 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 55.55 + 0.00) = 55.55 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	-6.38	-1.14	0.00	0.00	0.00	55.55

Segment Leq : 55.55 dBA

Results segment # 3: Orleans NB (night)

Source height = 1.50 m

ROAD (0.00 + 50.45 + 0.00) = 50.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-40	90	0.48	63.07	0.00	-10.39	-2.23	0.00	0.00	0.00	50.45

Segment Leq : 50.45 dBA

Results segment # 4: Orleans SB (night)

Source height = 1.50 m

ROAD (0.00 + 49.50 + 0.00) = 49.50 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-40	90	0.48	63.07	0.00	-11.34	-2.23	0.00	0.00	0.00	49.50

Segment Leq : 49.50 dBA

Total Leq All Segments: 60.66 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 67.23
(NIGHT): 60.66

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:40:53
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau2u.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (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 : 27.50 / 27.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (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 : 39.50 / 39.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

```
Reference angle           :   0.00


Road data, segment # 3: Orleans 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: Orleans 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  :  85.50 / 85.50  m
Receiver height           :   4.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Road data, segment # 4: Orleans 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 # 4: Orleans 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  :  97.50 / 97.50  m
Receiver height           :   4.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Results segment # 1: Jeanne D'Arc EB (day)
```

Source height = 1.50 m

ROAD (0.00 + 65.23 + 0.00) = 65.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.57	70.67	0.00	-4.13	-1.30	0.00	0.00	0.00	65.23

Segment Leq : 65.23 dBA

Results segment # 2: Jeanne D'Arc WB (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	0.57	70.67	0.00	-6.60	-1.30	0.00	0.00	0.00	62.76

Segment Leq : 62.76 dBA

Results segment # 3: Orleans NB (day)

Source height = 1.50 m

ROAD (0.00 + 54.48 + 0.00) = 54.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.57	70.67	0.00	-11.87	-4.31	0.00	0.00	0.00	54.48

Segment Leq : 54.48 dBA

Results segment # 4: Orleans SB (day)

Source height = 1.50 m

ROAD (0.00 + 53.59 + 0.00) = 53.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.57	70.67	0.00	-12.76	-4.31	0.00	0.00	0.00	53.59

Segment Leq : 53.59 dBA

Total Leq All Segments: 67.58 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 58.04 + 0.00) = 58.04 dBA

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

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	-3.90	-1.14	0.00	0.00	0.00	58.04

Segment Leq : 58.04 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 55.71 + 0.00) = 55.71 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	-6.22	-1.14	0.00	0.00	0.00	55.71

Segment Leq : 55.71 dBA

Results segment # 3: Orleans NB (night)

Source height = 1.50 m

ROAD (0.00 + 47.73 + 0.00) = 47.73 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	-11.19	-4.15	0.00	0.00	0.00	47.73

Segment Leq : 47.73 dBA

Results segment # 4: Orleans SB (night)

Source height = 1.50 m

ROAD (0.00 + 46.89 + 0.00) = 46.89 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	-12.03	-4.15	0.00	0.00	0.00	46.89

Segment Leq : 46.89 dBA

Total Leq All Segments: 60.48 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 67.58
(NIGHT): 60.48

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:40:55
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau3l.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -90.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 37.00 / 37.00 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -90.00 deg -5.00 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 : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

```
Reference angle           :   0.00


Road data, segment # 3: Orleans 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: Orleans NB (day/night)
--------------------------------------------
Angle1   Angle2           : -30.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  75.50 / 75.50  m
Receiver height           :   1.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Road data, segment # 4: Orleans 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 # 4: Orleans SB (day/night)
--------------------------------------------
Angle1   Angle2           : -30.00 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           :   1.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Results segment # 1: Jeanne D'Arc EB (day)
```

Source height = 1.50 m

ROAD (0.00 + 59.34 + 0.00) = 59.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.66	70.67	0.00	-6.51	-4.82	0.00	0.00	0.00	59.34

Segment Leq : 59.34 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 57.31 + 0.00) = 57.31 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.66	70.67	0.00	-8.53	-4.82	0.00	0.00	0.00	57.31

Segment Leq : 57.31 dBA

Results segment # 3: Orleans NB (day)

Source height = 1.50 m

ROAD (0.00 + 56.17 + 0.00) = 56.17 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	90	0.66	70.67	0.00	-11.65	-2.85	0.00	0.00	0.00	56.17

Segment Leq : 56.17 dBA

Results segment # 4: Orleans SB (day)

Source height = 1.50 m

ROAD (0.00 + 55.10 + 0.00) = 55.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	90	0.66	70.67	0.00	-12.71	-2.85	0.00	0.00	0.00	55.10

Segment Leq : 55.10 dBA

Total Leq All Segments: 63.29 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 52.79 + 0.00) = 52.79 dBA

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

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.48	63.07	0.00	-5.80	-4.47	0.00	0.00	0.00	52.79

Segment Leq : 52.79 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 50.99 + 0.00) = 50.99 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.48	63.07	0.00	-7.61	-4.47	0.00	0.00	0.00	50.99

Segment Leq : 50.99 dBA

Results segment # 3: Orleans NB (night)

Source height = 1.50 m

ROAD (0.00 + 50.07 + 0.00) = 50.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	90	0.48	63.07	0.00	-10.39	-2.61	0.00	0.00	0.00	50.07

Segment Leq : 50.07 dBA

Results segment # 4: Orleans SB (night)

Source height = 1.50 m

ROAD (0.00 + 49.12 + 0.00) = 49.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	90	0.48	63.07	0.00	-11.34	-2.61	0.00	0.00	0.00	49.12

Segment Leq : 49.12 dBA

Total Leq All Segments: 56.98 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 63.29
(NIGHT): 56.98

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:40:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau4u.te Time Period: Day/Night 16/8 hours
Description: Block a Unit 4u Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -5.00 deg 70.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 34.00 / 34.00 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -5.00 deg 70.00 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 : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 60.64 + 0.00) = 60.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-5	70	0.57	70.67	0.00	-5.58	-4.44	0.00	0.00	0.00	60.64

Segment Leq : 60.64 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 58.58 + 0.00) = 58.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-5	70	0.57	70.67	0.00	-7.64	-4.44	0.00	0.00	0.00	58.58

Segment Leq : 58.58 dBA

Total Leq All Segments: 62.74 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 53.46 + 0.00) = 53.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-5	70	0.48	63.07	0.00	-5.26	-4.35	0.00	0.00	0.00	53.46

Segment Leq : 53.46 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 51.52 + 0.00) = 51.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-5	70	0.48	63.07	0.00	-7.20	-4.35	0.00	0.00	0.00	51.52

Segment Leq : 51.52 dBA

Total Leq All Segments: 55.61 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 62.74
(NIGHT): 55.61

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:40:58
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau10u.te Time Period: Day/Night 16/8 hours
Description: Block a Unit 10u Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -10.00 deg 15.00 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 : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -10.00 deg 15.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 66.50 / 66.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 53.27 + 0.00) = 53.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	15	0.57	70.67	0.00	-8.80	-8.60	0.00	0.00	0.00	53.27

Segment Leq : 53.27 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 51.92 + 0.00) = 51.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	15	0.57	70.67	0.00	-10.15	-8.60	0.00	0.00	0.00	51.92

Segment Leq : 51.92 dBA

Total Leq All Segments: 55.66 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 46.18 + 0.00) = 46.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	15	0.48	63.07	0.00	-8.29	-8.59	0.00	0.00	0.00	46.18

Segment Leq : 46.18 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 44.90 + 0.00) = 44.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	15	0.48	63.07	0.00	-9.57	-8.59	0.00	0.00	0.00	44.90

Segment Leq : 44.90 dBA

Total Leq All Segments: 48.60 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.66
(NIGHT): 48.60

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:00
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau12u.te Time Period: Day/Night 16/8 hours
Description: Block a Unit 12u Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -10.00 deg 10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 61.50 / 61.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -10.00 deg 10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 73.50 / 73.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 51.49 + 0.00) = 51.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	10	0.57	70.67	0.00	-9.62	-9.56	0.00	0.00	0.00	51.49

Segment Leq : 51.49 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 50.27 + 0.00) = 50.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	10	0.57	70.67	0.00	-10.84	-9.56	0.00	0.00	0.00	50.27

Segment Leq : 50.27 dBA

Total Leq All Segments: 53.93 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 44.45 + 0.00) = 44.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	10	0.48	63.07	0.00	-9.07	-9.55	0.00	0.00	0.00	44.45

Segment Leq : 44.45 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 43.30 + 0.00) = 43.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	10	0.48	63.07	0.00	-10.22	-9.55	0.00	0.00	0.00	43.30

Segment Leq : 43.30 dBA

Total Leq All Segments: 46.92 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.93
(NIGHT): 46.92

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:01
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bau15l.te Time Period: Day/Night 16/8 hours
Description: Block a Unit 12u Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -60.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 74.50 / 74.50 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -60.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 86.50 / 86.50 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

```
Reference angle           :   0.00


Road data, segment # 3: Orleans 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: Orleans NB (day/night)
--------------------------------------------
Angle1   Angle2           :  35.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  75.50 / 75.50  m
Receiver height           :   1.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Road data, segment # 4: Orleans 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 # 4: Orleans SB (day/night)
--------------------------------------------
Angle1   Angle2           :  35.00 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           :   1.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Results segment # 1: Jeanne D'Arc EB (day)
```

Source height = 1.50 m

ROAD (0.00 + 53.35 + 0.00) = 53.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-60	-5	0.66	70.67	0.00	-11.55	-5.77	0.00	0.00	0.00	53.35

Segment Leq : 53.35 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 52.27 + 0.00) = 52.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-60	-5	0.66	70.67	0.00	-12.63	-5.77	0.00	0.00	0.00	52.27

Segment Leq : 52.27 dBA

Results segment # 3: Orleans NB (day)

Source height = 1.50 m

ROAD (0.00 + 51.35 + 0.00) = 51.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	90	0.66	70.67	0.00	-11.65	-7.67	0.00	0.00	0.00	51.35

Segment Leq : 51.35 dBA

Results segment # 4: Orleans SB (day)

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
35	90	0.66	70.67	0.00	-12.71	-7.67	0.00	0.00	0.00	50.28

Segment Leq : 50.28 dBA

Total Leq All Segments: 57.98 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 47.16 + 0.00) = 47.16 dBA

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

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-60	-5	0.48	63.07	0.00	-10.30	-5.60	0.00	0.00	0.00	47.16

Segment Leq : 47.16 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 46.20 + 0.00) = 46.20 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-60	-5	0.48	63.07	0.00	-11.26	-5.60	0.00	0.00	0.00	46.20

Segment Leq : 46.20 dBA

Results segment # 3: Orleans NB (night)

Source height = 1.50 m

ROAD (0.00 + 45.61 + 0.00) = 45.61 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	90	0.48	63.07	0.00	-10.39	-7.07	0.00	0.00	0.00	45.61

Segment Leq : 45.61 dBA

Results segment # 4: Orleans SB (night)

Source height = 1.50 m

ROAD (0.00 + 44.66 + 0.00) = 44.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	90	0.48	63.07	0.00	-11.34	-7.07	0.00	0.00	0.00	44.66

Segment Leq : 44.66 dBA

Total Leq All Segments: 52.02 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.98
(NIGHT): 52.02

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:03
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu3u.te Time Period: Day/Night 16/8 hours
Description: Block a Unit 12u Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -45.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 37.00 / 37.00 m
Receiver height : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -45.00 deg -5.00 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 : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 57.68 + 0.00) = 57.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	-5	0.57	70.67	0.00	-6.16	-6.83	0.00	0.00	0.00	57.68

Segment Leq : 57.68 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 55.76 + 0.00) = 55.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	-5	0.57	70.67	0.00	-8.07	-6.83	0.00	0.00	0.00	55.76

Segment Leq : 55.76 dBA

Total Leq All Segments: 59.84 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 50.88 + 0.00) = 50.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	-5	0.39	63.07	0.00	-5.45	-6.74	0.00	0.00	0.00	50.88

Segment Leq : 50.88 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 49.18 + 0.00) = 49.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	-5	0.39	63.07	0.00	-7.15	-6.74	0.00	0.00	0.00	49.18

Segment Leq : 49.18 dBA

Total Leq All Segments: 53.12 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.84
(NIGHT): 53.12

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:05
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu7u.te Time Period: Day/Night 16/8 hours
Description: Block a Unit 12u Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -25.00 deg -5.00 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 : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -25.00 deg -5.00 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 : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 52.68 + 0.00) = 52.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-25	-5	0.57	70.67	0.00	-8.34	-9.64	0.00	0.00	0.00	52.68

Segment Leq : 52.68 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 51.24 + 0.00) = 51.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-25	-5	0.57	70.67	0.00	-9.79	-9.64	0.00	0.00	0.00	51.24

Segment Leq : 51.24 dBA

Total Leq All Segments: 55.03 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 46.07 + 0.00) = 46.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-25	-5	0.39	63.07	0.00	-7.39	-9.61	0.00	0.00	0.00	46.07

Segment Leq : 46.07 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 44.79 + 0.00) = 44.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-25	-5	0.39	63.07	0.00	-8.66	-9.61	0.00	0.00	0.00	44.79

Segment Leq : 44.79 dBA

Total Leq All Segments: 48.49 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.03
(NIGHT): 48.49

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:06
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu8u.te Time Period: Day/Night 16/8 hours
Description: Block a Unit 12u Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -10.00 deg 20.00 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 : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -10.00 deg 20.00 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 : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 54.77 + 0.00) = 54.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	20	0.57	70.67	0.00	-8.07	-7.82	0.00	0.00	0.00	54.77

Segment Leq : 54.77 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 53.28 + 0.00) = 53.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	20	0.57	70.67	0.00	-9.57	-7.82	0.00	0.00	0.00	53.28

Segment Leq : 53.28 dBA

Total Leq All Segments: 57.10 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 48.11 + 0.00) = 48.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	20	0.39	63.07	0.00	-7.15	-7.81	0.00	0.00	0.00	48.11

Segment Leq : 48.11 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 46.79 + 0.00) = 46.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	20	0.39	63.07	0.00	-8.47	-7.81	0.00	0.00	0.00	46.79

Segment Leq : 46.79 dBA

Total Leq All Segments: 50.51 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.10
(NIGHT): 50.51

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:07
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu9u.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -20.00 deg -5.00 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 : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -20.00 deg -5.00 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 : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 50.59 + 0.00) = 50.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	-5	0.57	70.67	0.00	-9.22	-10.86	0.00	0.00	0.00	50.59

Segment Leq : 50.59 dBA

Results segment # 2: Jeanne D'Arc WB (day)

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
-20	-5	0.57	70.67	0.00	-10.50	-10.86	0.00	0.00	0.00	49.30

Segment Leq : 49.30 dBA

Total Leq All Segments: 53.00 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 44.07 + 0.00) = 44.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	-5	0.39	63.07	0.00	-8.16	-10.84	0.00	0.00	0.00	44.07

Segment Leq : 44.07 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 42.93 + 0.00) = 42.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	-5	0.39	63.07	0.00	-9.30	-10.84	0.00	0.00	0.00	42.93

Segment Leq : 42.93 dBA

Total Leq All Segments: 46.55 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.00
(NIGHT): 46.55

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bbu10u.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -10.00 deg 15.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 65.00 / 65.00 m
Receiver height : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -10.00 deg 15.00 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 : 4.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 52.07 + 0.00) = 52.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	15	0.57	70.67	0.00	-10.00	-8.60	0.00	0.00	0.00	52.07

Segment Leq : 52.07 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 50.92 + 0.00) = 50.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	15	0.57	70.67	0.00	-11.15	-8.60	0.00	0.00	0.00	50.92

Segment Leq : 50.92 dBA

Total Leq All Segments: 54.54 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 45.63 + 0.00) = 45.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	15	0.39	63.07	0.00	-8.85	-8.59	0.00	0.00	0.00	45.63

Segment Leq : 45.63 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 44.61 + 0.00) = 44.61 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	15	0.39	63.07	0.00	-9.88	-8.59	0.00	0.00	0.00	44.61

Segment Leq : 44.61 dBA

Total Leq All Segments: 48.16 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.54
(NIGHT): 48.16

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu4l.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -15.00 deg 85.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 36.00 / 36.00 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -15.00 deg 85.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 48.00 / 48.00 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 60.76 + 0.00) = 60.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	85	0.66	70.67	0.00	-6.31	-3.60	0.00	0.00	0.00	60.76

Segment Leq : 60.76 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 58.68 + 0.00) = 58.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	85	0.66	70.67	0.00	-8.39	-3.60	0.00	0.00	0.00	58.68

Segment Leq : 58.68 dBA

Total Leq All Segments: 62.85 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 54.09 + 0.00) = 54.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	85	0.48	63.07	0.00	-5.63	-3.36	0.00	0.00	0.00	54.09

Segment Leq : 54.09 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 52.24 + 0.00) = 52.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	85	0.48	63.07	0.00	-7.48	-3.36	0.00	0.00	0.00	52.24

Segment Leq : 52.24 dBA

Total Leq All Segments: 56.27 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 62.85
(NIGHT): 56.27

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 23:26:39
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu5u.te Time Period: Day/Night 16/8 hours
Description: block c unit 5u indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -35.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 45.00 / 45.00 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -35.00 deg -5.00 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 : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 55.21 + 0.00) = 55.21 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-35	-5	0.57	70.67	0.00	-7.49	-7.97	0.00	0.00	0.00	55.21

Segment Leq : 55.21 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 53.60 + 0.00) = 53.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-35	-5	0.57	70.67	0.00	-9.10	-7.97	0.00	0.00	0.00	53.60

Segment Leq : 53.60 dBA

Total Leq All Segments: 57.49 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 48.07 + 0.00) = 48.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-35	-5	0.48	63.07	0.00	-7.06	-7.94	0.00	0.00	0.00	48.07

Segment Leq : 48.07 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 46.55 + 0.00) = 46.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-35	-5	0.48	63.07	0.00	-8.58	-7.94	0.00	0.00	0.00	46.55

Segment Leq : 46.55 dBA

Total Leq All Segments: 50.39 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.49
(NIGHT): 50.39

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:11
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu7u.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -25.00 deg -5.00 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 : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -25.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 64.00 / 64.00 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 52.55 + 0.00) = 52.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-25	-5	0.57	70.67	0.00	-8.48	-9.64	0.00	0.00	0.00	52.55

Segment Leq : 52.55 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 51.13 + 0.00) = 51.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-25	-5	0.57	70.67	0.00	-9.89	-9.64	0.00	0.00	0.00	51.13

Segment Leq : 51.13 dBA

Total Leq All Segments: 54.91 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 45.45 + 0.00) = 45.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-25	-5	0.48	63.07	0.00	-7.99	-9.63	0.00	0.00	0.00	45.45

Segment Leq : 45.45 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 44.12 + 0.00) = 44.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-25	-5	0.48	63.07	0.00	-9.33	-9.63	0.00	0.00	0.00	44.12

Segment Leq : 44.12 dBA

Total Leq All Segments: 47.85 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.91
(NIGHT): 47.85

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:15
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu14l.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (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 : 70.50 / 70.50 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (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 : 82.50 / 82.50 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

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
-10	35	0.66	70.67	0.00	-11.16	-6.16	0.00	0.00	0.00	53.34

Segment Leq : 53.34 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 52.21 + 0.00) = 52.21 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	35	0.66	70.67	0.00	-12.29	-6.16	0.00	0.00	0.00	52.21

Segment Leq : 52.21 dBA

Total Leq All Segments: 55.82 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 46.99 + 0.00) = 46.99 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	35	0.48	63.07	0.00	-9.95	-6.13	0.00	0.00	0.00	46.99

Segment Leq : 46.99 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 45.98 + 0.00) = 45.98 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	35	0.48	63.07	0.00	-10.96	-6.13	0.00	0.00	0.00	45.98

Segment Leq : 45.98 dBA

Total Leq All Segments: 49.52 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.82
(NIGHT): 49.52

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:17
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bcu16l.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (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 : 77.50 / 77.50 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (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 : 89.50 / 89.50 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 52.19 + 0.00) = 52.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	30	0.66	70.67	0.00	-11.84	-6.64	0.00	0.00	0.00	52.19

Segment Leq : 52.19 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 51.15 + 0.00) = 51.15 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	30	0.66	70.67	0.00	-12.88	-6.64	0.00	0.00	0.00	51.15

Segment Leq : 51.15 dBA

Total Leq All Segments: 54.71 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 45.91 + 0.00) = 45.91 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	30	0.48	63.07	0.00	-10.56	-6.61	0.00	0.00	0.00	45.91

Segment Leq : 45.91 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 44.98 + 0.00) = 44.98 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	30	0.48	63.07	0.00	-11.48	-6.61	0.00	0.00	0.00	44.98

Segment Leq : 44.98 dBA

Total Leq All Segments: 48.48 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.71
(NIGHT): 48.48

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu11.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -85.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 31.00 / 31.00 m
Receiver height : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -85.00 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 : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 63.96 + 0.00) = 63.96 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	90	0.66	70.67	0.00	-5.23	-1.48	0.00	0.00	0.00	63.96

Segment Leq : 63.96 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 61.60 + 0.00) = 61.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	90	0.66	70.67	0.00	-7.59	-1.48	0.00	0.00	0.00	61.60

Segment Leq : 61.60 dBA

Total Leq All Segments: 65.95 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 57.23 + 0.00) = 57.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	90	0.48	63.07	0.00	-4.67	-1.17	0.00	0.00	0.00	57.23

Segment Leq : 57.23 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 55.13 + 0.00) = 55.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-85	90	0.48	63.07	0.00	-6.77	-1.17	0.00	0.00	0.00	55.13

Segment Leq : 55.13 dBA

Total Leq All Segments: 59.32 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.95
(NIGHT): 59.32

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:19
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu2u.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (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 : 30.00 / 30.00 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (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 : 42.00 / 42.00 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 64.64 + 0.00) = 64.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.57	70.67	0.00	-4.73	-1.30	0.00	0.00	0.00	64.64

Segment Leq : 64.64 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 62.34 + 0.00) = 62.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.57	70.67	0.00	-7.02	-1.30	0.00	0.00	0.00	62.34

Segment Leq : 62.34 dBA

Total Leq All Segments: 66.65 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 57.48 + 0.00) = 57.48 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	-4.46	-1.14	0.00	0.00	0.00	57.48

Segment Leq : 57.48 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 55.31 + 0.00) = 55.31 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	-6.62	-1.14	0.00	0.00	0.00	55.31

Segment Leq : 55.31 dBA

Total Leq All Segments: 59.54 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.65
(NIGHT): 59.54

```
STAMSON 5.0        NORMAL REPORT        Date: 13-02-2023 14:27:24
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu3l.te             Time Period: Day/Night 16/8 hours
Description: building 'd' unit 3L indoor


Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)
-------------------------------------------------
Angle1   Angle2           : -70.00 deg   0.00 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           :   1.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

FF
Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)
-------------------------------------------------
Angle1   Angle2           : -70.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  50.50 / 50.50  m
Receiver height           :   1.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

FF
Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 58.98 + 0.00) = 58.98 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	0	0.66	70.67	0.00	-6.80	-4.89	0.00	0.00	0.00	58.98

Segment Leq : 58.98 dBA

FF
Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 57.02 + 0.00) = 57.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	0	0.66	70.67	0.00	-8.75	-4.89	0.00	0.00	0.00	57.02

Segment Leq : 57.02 dBA

Total Leq All Segments: 61.12 dBA

FF
Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 52.32 + 0.00) = 52.32 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	0	0.48	63.07	0.00	-6.06	-4.69	0.00	0.00	0.00	52.32

Segment Leq : 52.32 dBA

FF
Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 50.57 + 0.00) = 50.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	0	0.48	63.07	0.00	-7.80	-4.69	0.00	0.00	0.00	50.57

Segment Leq : 50.57 dBA

Total Leq All Segments: 54.54 dBA

FF

TOTAL Leq FROM ALL SOURCES (DAY): 61.12
(NIGHT): 54.54

FF
FF

```
STAMSON 5.0        NORMAL REPORT        Date: 13-02-2023 14:27:52
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu4u.te             Time Period: Day/Night 16/8 hours
Description: building 'd' unit 4u indoor


Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)
-------------------------------------------------
Angle1   Angle2           :   0.00 deg   70.00 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           :   4.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

FF
Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)
-------------------------------------------------
Angle1   Angle2           :   0.00 deg   70.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  48.50 / 48.50  m
Receiver height           :   4.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

FF
Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 59.81 + 0.00) = 59.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	70	0.57	70.67	0.00	-6.06	-4.79	0.00	0.00	0.00	59.81

Segment Leq : 59.81 dBA

FF
Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 57.87 + 0.00) = 57.87 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	70	0.57	70.67	0.00	-8.00	-4.79	0.00	0.00	0.00	57.87

Segment Leq : 57.87 dBA

Total Leq All Segments: 61.96 dBA

FF
Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 52.66 + 0.00) = 52.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	70	0.48	63.07	0.00	-5.72	-4.69	0.00	0.00	0.00	52.66

Segment Leq : 52.66 dBA

FF
Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 50.83 + 0.00) = 50.83 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	70	0.48	63.07	0.00	-7.54	-4.69	0.00	0.00	0.00	50.83

Segment Leq : 50.83 dBA

Total Leq All Segments: 54.85 dBA

FF

TOTAL Leq FROM ALL SOURCES (DAY): 61.96
(NIGHT): 54.85

```
FF
FF

```

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:20
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu8u.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : 0.00 deg 40.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 50.50 / 50.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : 0.00 deg 40.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 62.50 / 62.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 55.65 + 0.00) = 55.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	40	0.57	70.67	0.00	-8.28	-6.74	0.00	0.00	0.00	55.65

Segment Leq : 55.65 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 54.19 + 0.00) = 54.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	40	0.57	70.67	0.00	-9.73	-6.74	0.00	0.00	0.00	54.19

Segment Leq : 54.19 dBA

Total Leq All Segments: 57.99 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 48.56 + 0.00) = 48.56 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	40	0.48	63.07	0.00	-7.80	-6.71	0.00	0.00	0.00	48.56

Segment Leq : 48.56 dBA

Results segment # 2: Jeanne D'Arc WB (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
0	40	0.48	63.07	0.00	-9.17	-6.71	0.00	0.00	0.00	47.19

Segment Leq : 47.19 dBA

Total Leq All Segments: 50.94 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.99
(NIGHT): 50.94

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:21
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu10u.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : 0.00 deg 35.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 57.50 / 57.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : 0.00 deg 35.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 69.50 / 69.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 54.23 + 0.00) = 54.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	35	0.57	70.67	0.00	-9.16	-7.27	0.00	0.00	0.00	54.23

Segment Leq : 54.23 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 52.94 + 0.00) = 52.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	35	0.57	70.67	0.00	-10.46	-7.27	0.00	0.00	0.00	52.94

Segment Leq : 52.94 dBA

Total Leq All Segments: 56.64 dBA

Results segment # 1: Jeanne D'Arc EB (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
0	35	0.48	63.07	0.00	-8.64	-7.25	0.00	0.00	0.00	47.19

Segment Leq : 47.19 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 45.97 + 0.00) = 45.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	35	0.48	63.07	0.00	-9.86	-7.25	0.00	0.00	0.00	45.97

Segment Leq : 45.97 dBA

Total Leq All Segments: 49.63 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.64
(NIGHT): 49.63

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 22:41:22
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu11l.te Time Period: Day/Night 16/8 hours
Description: Block b Unit 9U Indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : -30.00 deg 10.00 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 : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : -30.00 deg 10.00 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 : 1.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 53.35 + 0.00) = 53.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	10	0.66	70.67	0.00	-10.68	-6.64	0.00	0.00	0.00	53.35

Segment Leq : 53.35 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 52.14 + 0.00) = 52.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	10	0.66	70.67	0.00	-11.89	-6.64	0.00	0.00	0.00	52.14

Segment Leq : 52.14 dBA

Total Leq All Segments: 55.80 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 46.94 + 0.00) = 46.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	10	0.48	63.07	0.00	-9.52	-6.61	0.00	0.00	0.00	46.94

Segment Leq : 46.94 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 45.86 + 0.00) = 45.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	10	0.48	63.07	0.00	-10.60	-6.61	0.00	0.00	0.00	45.86

Segment Leq : 45.86 dBA

Total Leq All Segments: 49.44 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.80
(NIGHT): 49.44

STAMSON 5.0 NORMAL REPORT Date: 12-02-2023 23:27:04
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: bdu12u.te Time Period: Day/Night 16/8 hours
Description: block d unit 12u indoor

Road data, segment # 1: Jeanne D'Arc EB (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: Jeanne D'Arc EB (day/night)

Angle1 Angle2 : 0.00 deg 30.00 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 : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Jeanne D'Arc WB (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: Jeanne D'Arc WB (day/night)

Angle1 Angle2 : 0.00 deg 30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 76.50 / 76.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Jeanne D'Arc EB (day)

Source height = 1.50 m

ROAD (0.00 + 52.82 + 0.00) = 52.82 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	30	0.57	70.67	0.00	-9.95	-7.90	0.00	0.00	0.00	52.82

Segment Leq : 52.82 dBA

Results segment # 2: Jeanne D'Arc WB (day)

Source height = 1.50 m

ROAD (0.00 + 51.66 + 0.00) = 51.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	30	0.57	70.67	0.00	-11.11	-7.90	0.00	0.00	0.00	51.66

Segment Leq : 51.66 dBA

Total Leq All Segments: 55.29 dBA

Results segment # 1: Jeanne D'Arc EB (night)

Source height = 1.50 m

ROAD (0.00 + 45.81 + 0.00) = 45.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	30	0.48	63.07	0.00	-9.38	-7.88	0.00	0.00	0.00	45.81

Segment Leq : 45.81 dBA

Results segment # 2: Jeanne D'Arc WB (night)

Source height = 1.50 m

ROAD (0.00 + 44.72 + 0.00) = 44.72 dBA

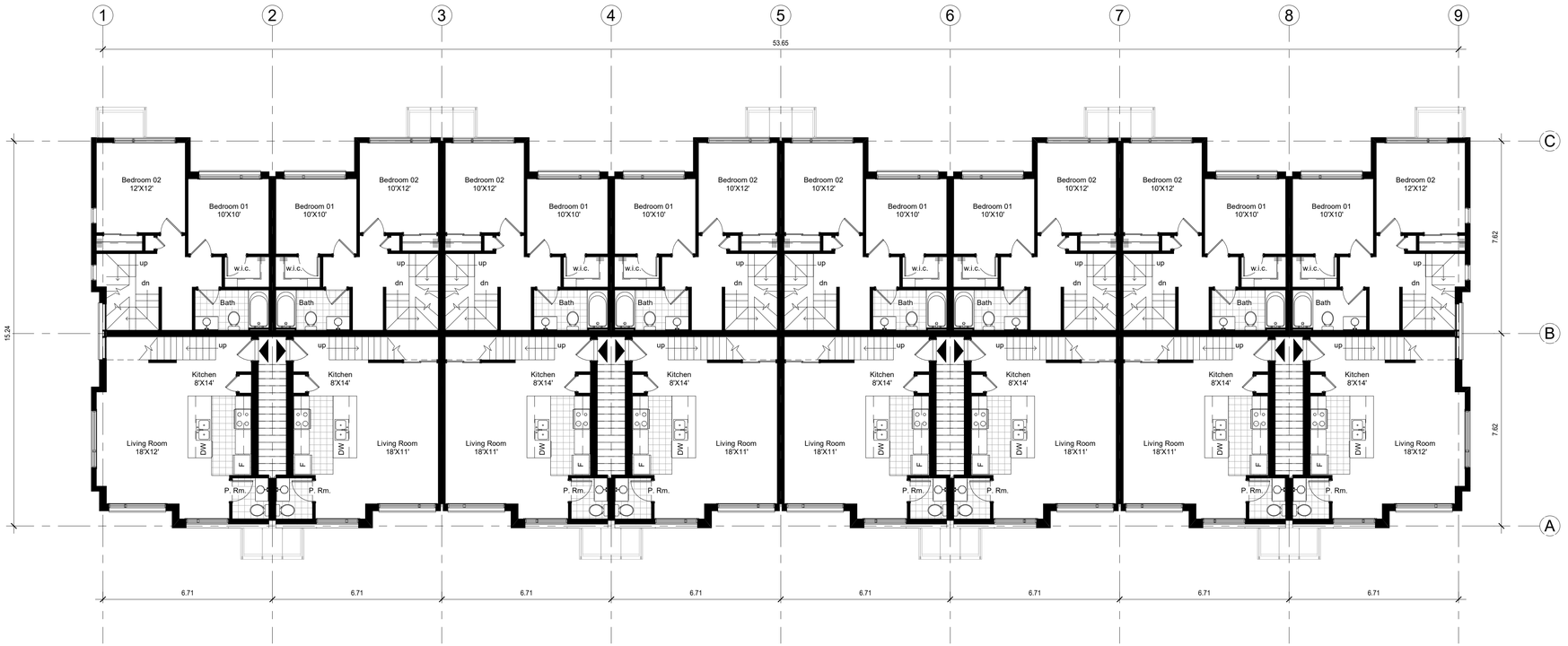
Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	30	0.48	63.07	0.00	-10.47	-7.88	0.00	0.00	0.00	44.72

Segment Leq : 44.72 dBA

Total Leq All Segments: 48.31 dBA

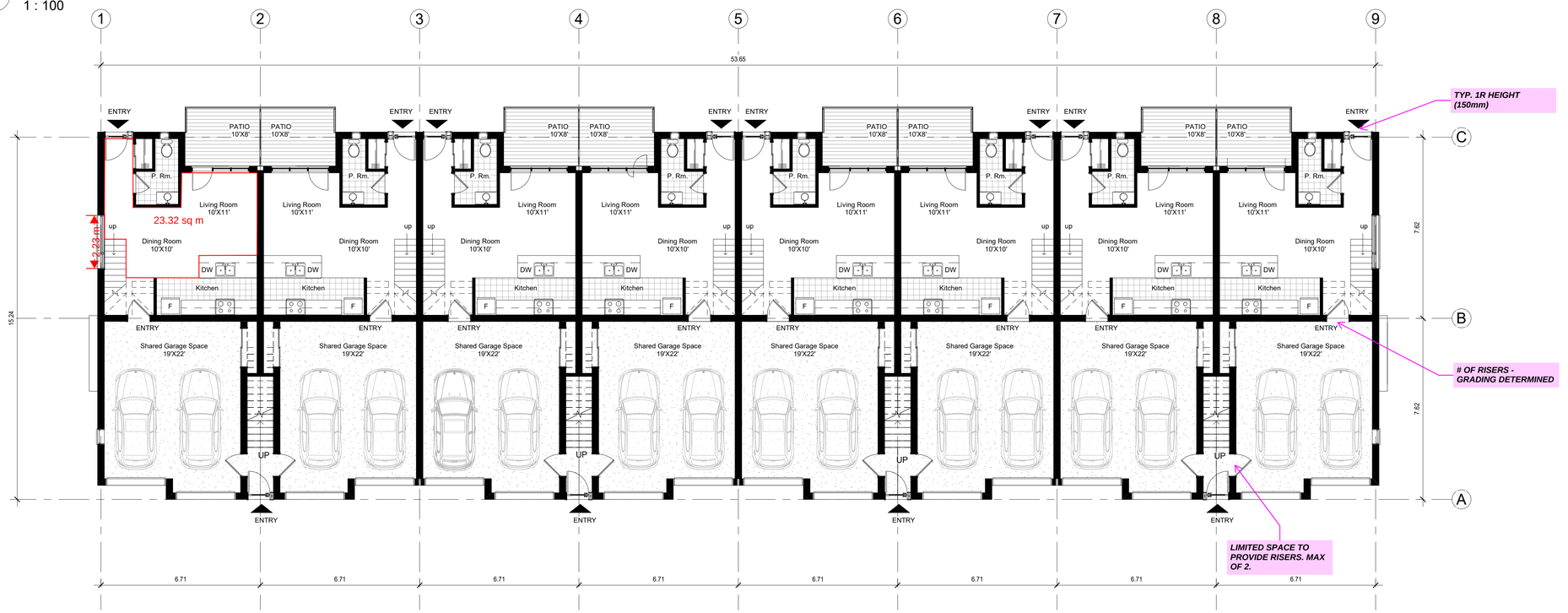
TOTAL Leq FROM ALL SOURCES (DAY): 55.29
(NIGHT): 48.31

Appendix B –
Sample Architectural Drawings



2 BLOCK A & C - SECOND FLOOR

1 : 100



1 BLOCK A & C - GROUND FLOOR

1 : 100

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No	Description	Date

Revision Schedule

Project Title

Project Description

ORLEANS GARDENS

1615 Orléans Blvd. Orléans, ON K1C 7E2

NORTH AMERICAN DEVELOPMENT GROUP

Project No.	17047
Scale	1 : 100
Drawn By	Author
Checked By	Checker

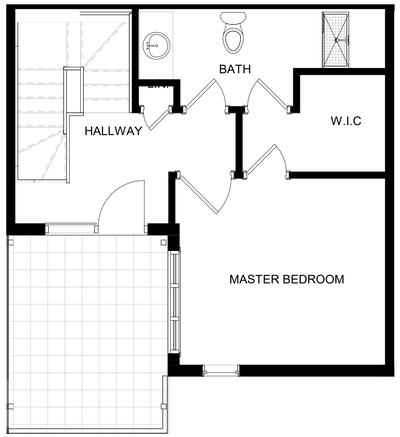
BLOCK A & C FLOOR PLANS

BLOCKS A, B, C & D

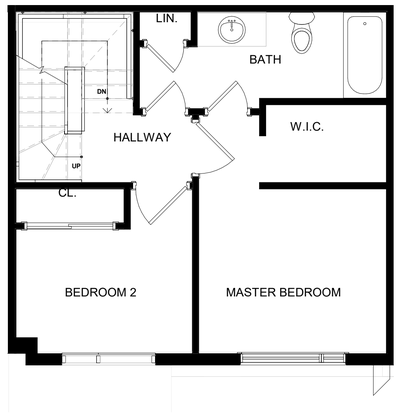
A1-0

AREA SCHEDULE - 3 STOREY B2B - - MIDDLE	
NAME	AREA
GROUND FLOOR	21.7 m²
SECOND FLOOR	45.4 m²
THIRD FLOOR	43.7 m²
FOURTH FLOOR	38.1 m²
Grand total	148.9 m²

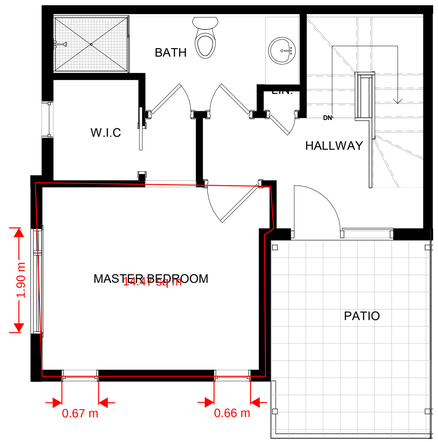
AREA SCHEDULE - 3 STOREY B2B - CORNER	
NAME	AREA
GROUND FLOOR	21.6 m²
SECOND FLOOR	47.0 m²
THIRD FLOOR	44.2 m²
FOURTH FLOOR	39.3 m²
Grand total	152.0 m²



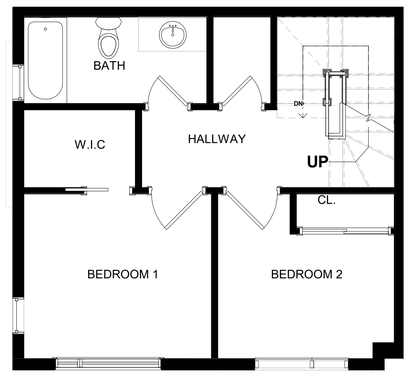
8 ROOF PLAN - INT. UNIT
1 : 50



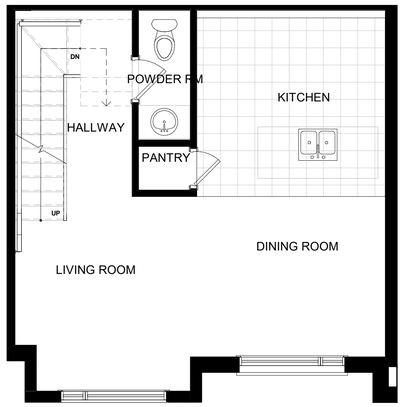
7 THIRD FLOOR PLAN - INT. UNIT
1 : 50



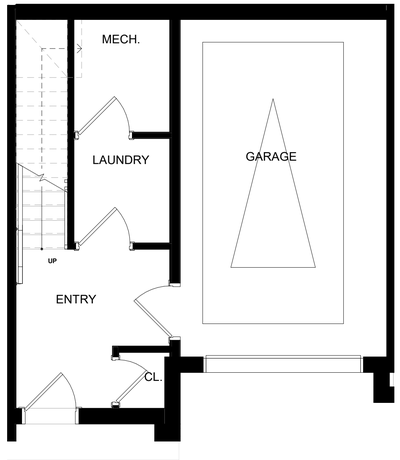
4 ROOF PLAN - END UNIT
1 : 50



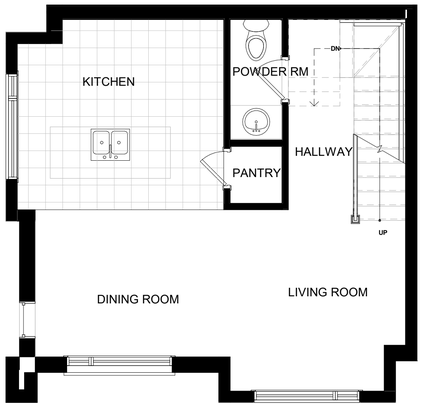
3 THIRD FLOOR PLAN - END UNIT
1 : 50



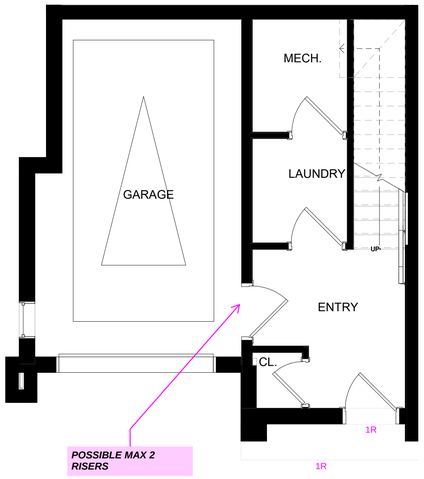
6 SECOND FLOOR PLAN - INT. UNIT
1 : 50



5 GROUND FLOOR PLAN - INT. UNIT
1 : 50



2 SECOND FLOOR PLAN - END UNIT
1 : 50



1 GROUND FLOOR PLAN - END UNIT
1 : 50

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No	Description	Date

Revision Schedule

Project Title

ORLEANS GARDENS

OTTAWA, ON.

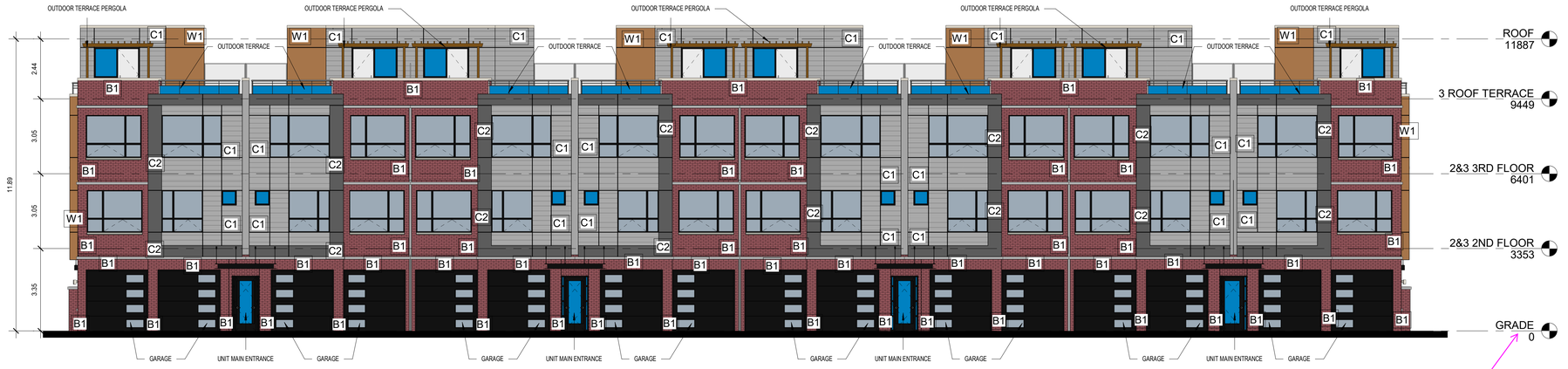
NORTH AMERICAN DEVELOPMENT GROUP

Project No.	17047
Scale	1 : 50
Drawn By	CG
Checked By	Checker

BLOCK B - FLOOR PLANS

BLOCKS A, B, C & D

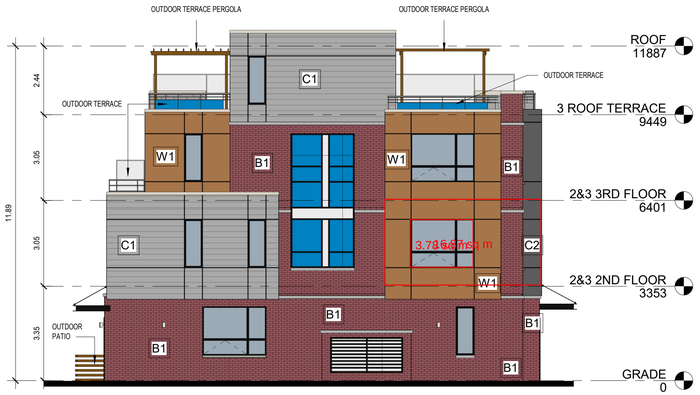
A1-2 7



4 SPA - BLOCK A - NORTH ELEVATION

1 : 100

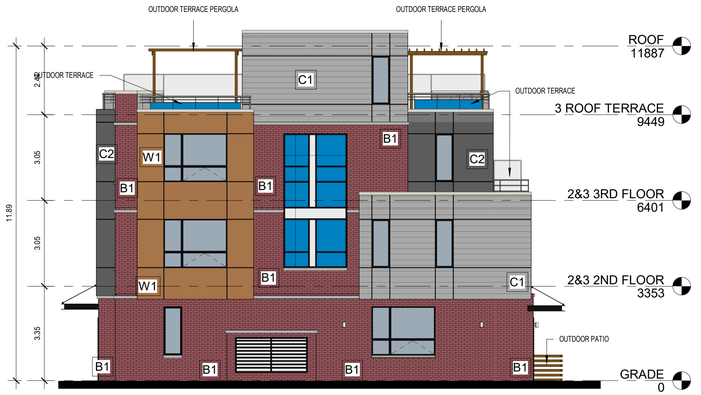
FF LEVEL MISSING - SHOULD BE AT LEAST 150mm ABOVE GRADE



2 SPA - BLOCK A - EAST ELEVATION

1 : 100

Material Legend
B1- Brick Veneer 1
B2- Brick Veneer 2
C1- Cementitious Plank
C2- Cementitious Panel - Accent colour
W1-Prefinished Wood siding
G1- Vinyl Window
PS- Prefinished Privacy Screen
MO-Prefinished Metal Owning
TW-Presure Treated Wood



3 SPA - BLOCK A - WEST ELEVATION

1 : 100

1 SPA - BLOCK A - SOUTH ELEVATION

1 : 100

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ISSUED FOR SPA	12/01/2022

No	Description	Date

Revision Schedule

Project Title

Project Description

ORLEANS GARDENS

1615 Orléans Blvd. Orléans, ON K1C 7E2

NORTH AMERICAN DEVELOPMENT GROUP

Project No.	17047
Scale	1 : 100
Drawn By	CG
Checked By	Checker

SPA ELEVATIONS - BLOCK A

BLOCKS A, B, C & D

A2-0 10

4 SPA - BLOCK B -NORTH ELEVATION

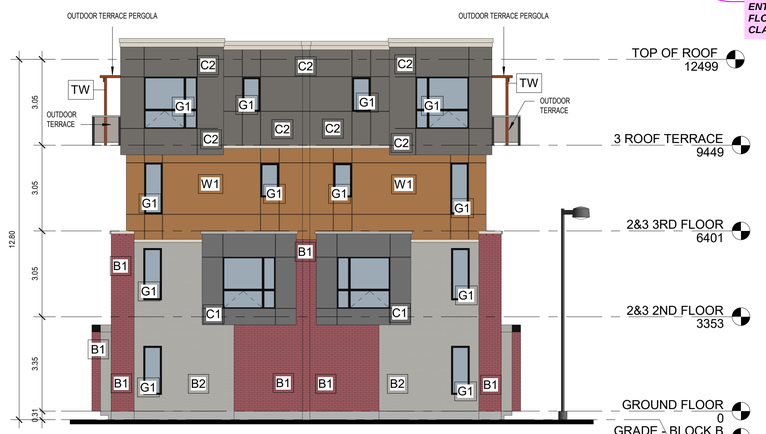
1 : 100

TWO RISERS - ONE AT ENTRANCE DOOR AND ANOTHER AT THE ENTRANCE PATH . SEE FLOOR PLAN FOR CLARITY

2 SPA - BLOCK B - EAST ELEVATION

1 : 100

Material Legend
B1- Brick Veneer 1
B2- Brick Veneer 2
C1- Cementitious Plank
C2- Cementitious Panel - Accent colour
W1-Prefinished Wood siding
G1- Vinyl Window
PS- Prefinished Privacy Screen
MO-Prefinished Metal Owning
TW-Presure Treated Wood



3 SPA - BLOCK B - WEST ELEVATION

1 : 100

1 SPA - BLOCK B - SOUTH ELEVATION

1 : 100

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PN

TN

TN = TRUE NORTH
PN = PROJECT NORTH

The contractor / builder must verify all dimensions on the job and report any discrepancy to the designer before proceeding with the work.

Drawings are NOT to be scaled. All drawings and specifications are instruments of service and the copyright property of the designer and must be returned upon request.

Issued For:

ISSUED FOR SPA	12/01/2022

No	Description	Date

Revision Schedule

Project Title

Project Description

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SPA ELEVATIONS - BLOCK B

BLOCKS A, B, C & D

A2-1

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Appendix C –
Sound Transmission Class (STC) Ratings

Living/Dining Room - Block A & C - 2nd Floor Living/Dining Room

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

1.0	Free field sound level		67.58	dBA	Noise source
	Correction for reflections		3	dBA	Road
	Outdoor sound level		70.58	dBA	Indoor Quarters
	Indoor sound level	(Daytime)	45	dBA	Living
	Required Noise Reduction (NR)		25.58	dB	Subtract indoor from outdoor sound level
2.0	Sound angle of insidence	0 to 90 degrees			C_1 Correction from Table 7.7 0 dB
					Sum 25.58 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	23.3 m^2	56.18026 % of floor area	
	Component Area	13.09 m^2		
	Room absorption category	Intermediate		C_3 from Table 7.9 -7 dB
				Correction 7 dB
5.0	Noise reduction if only this component transmits sound			40 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			14 dB
8.0	Determine from Table 7.8 the corresponding value of total transmitted sound energy			5 %

	Component:	Window		After step 2 25.58 dB
9.0	Transmits	95 % of total sound energy		C_2 from Table 7.8 0 dB
10.0	Room floor area	23.3 m^2	16.30901 % of floor area	
	Component Area	3.8 m^2		
	Room absorption category	Intermediate		C_3 from Table 7.9 -7 dB
11.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft		
	Component category	d. Sealed thick window, or exterior wall, or roof/ceil		C_4 from Table 7.10 7 dB
			$STC=NR+C_1+C_2+C_3+C_4$	Required STC 26

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

Master Bedroom - North Façade Block B, 4th Floor, End Unit

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

1.0	Free field sound level		60.66 dBA	Noise source	
	Correction for reflections		3 dBA	Road	
	Outdoor sound level		63.66 dBA	Indoor Quarters	
	Indoor sound level	(Night time)	40 dBA	Sleeping	
	Required Noise Reduction (NR)		23.66 dB	Subtract indoor from outdoor sound level	
2.0	Sound angle of insidence	0 to 90 degrees		C_1 Correction from Table 7.7	0 dB
				Sum	23.66 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	14.5 m^2	55.17241 % of floor area		
	Component Area	8 m^2			
	Room absorption category	Intermediate		C_3 from Table 7.9	-6 dB
				Correction	6 dB
5.0	Noise reduction if only this component transmits sound				39 dB
6.0	Required noise reduction (from Step 1)				24 dB
7.0	Term C_2: Subtract the Required NR from the Noise Reduction for this component				15 dB
8.0	Determine from Table 7.8 the corresponding value of total transmitted sound energy				5 %

	Component:	Window		After step 2	23.66 dB
9.0	Transmits	95 % of total sound energy		C_2 from Table 7.8	0 dB
10.0	Room floor area	14.5 m^2	22.06897 % of floor area		
	Component Area	3.2 m^2			
	Room absorption category	Intermediate		C_3 from Table 7.9	-6 dB
11.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft			
	Component category	d. Sealed thick window, or exterior wall, or roof/ceil		C_4 from Table 7.10	7 dB
			$STC=NR+C_1+C_2+C_3+C_4$	Required STC	25

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