

Avalon Encore – Stage 6
2336 Tenth Line Road
Infusion Terrace, Block 233
City of Ottawa
Environmental Noise
Impact Assessment

Prepared For:

Minto Communities Inc.

Prepared By:

Robinson Land Development

Our Project No. 17099
July 19, 2018

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1.0 INTRODUCTION

Robinson Land Development (a division of Robinson Consultants Inc.) has been retained by Minto Communities Inc., to prepare an environmental noise assessment for a proposed residential 64 unit terrace home in Avalon Encore – Stage 6 subdivision. This study is required by the municipality as part of their planning and approvals process in support of the planning application.

The site plan is bounded by Mer Bleue Road to the west, Decoeur Drive to the north, Street No. 2 to the east and existing residential lands to the south, within the City of Ottawa. The location of the development is shown on **Figure 1**.

This report will examine the noise impacts on the development from the local transportation corridors, establish noise attenuation measures, if required, and make recommendations on the findings.

2.0 SOUND LEVEL CRITERIA

2.1 Sound Level Limits

The criteria established by the City of Ottawa Environmental Noise Control Guidelines Planning and Growth Management Department City of Ottawa approved by city council May 10, 2006 forms the basis of this analysis.

Reference is also made to the criteria established by the Ministry of the Environment in its publication LU-131 Noise Assessment Criteria in Land Use Planning October 1997.

The following noise levels originating from road traffic will be used as the maximum acceptable levels:

2.1.1 Sound Level Criteria for Outdoor Living Areas (OLA)

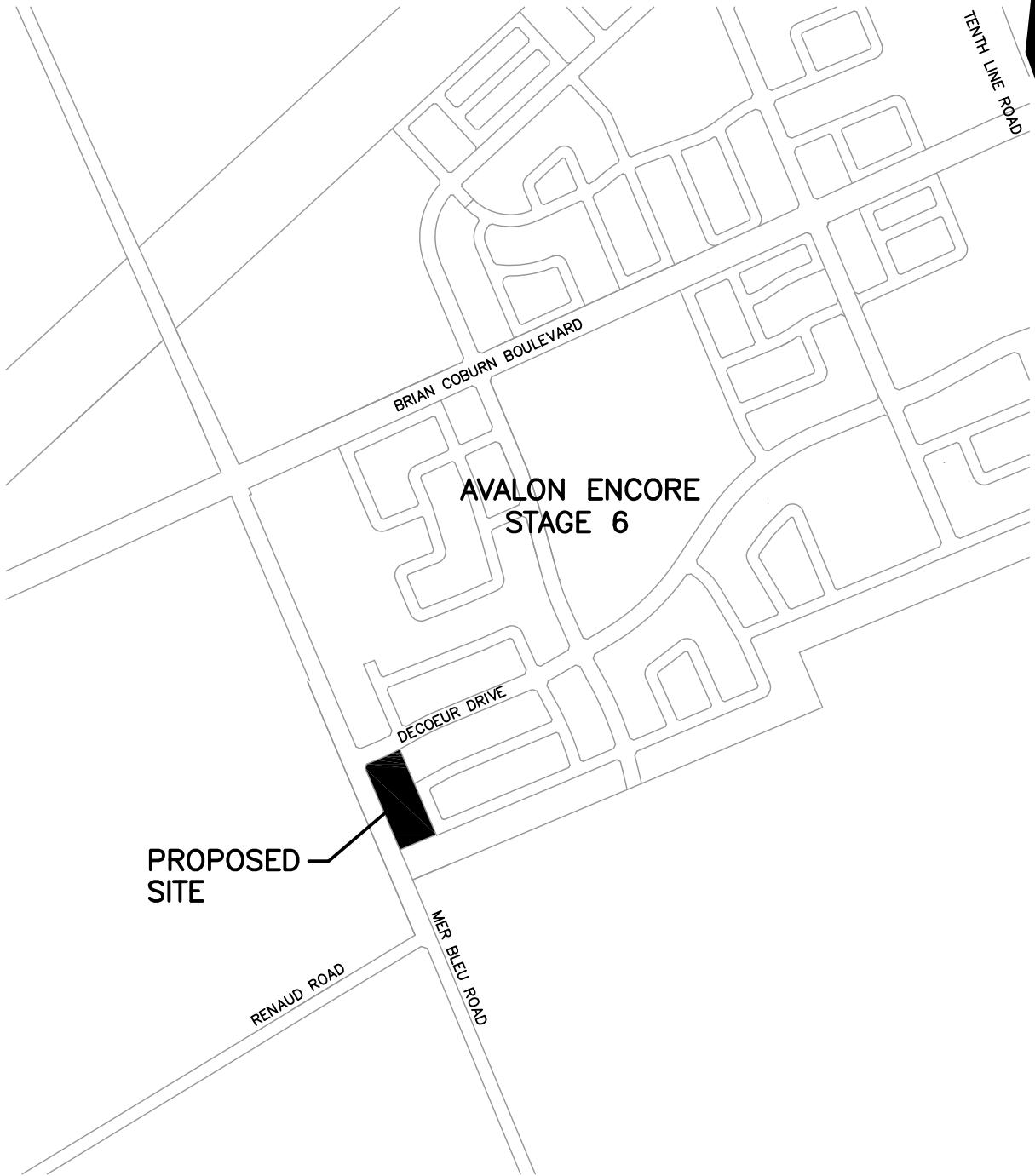
Day-time Period: (16 hr) 07:00 to 23:00 55 dBA Leq

$0 < \text{Leq} < 55 \text{ dBA}$	no measures are required
$55 < \text{Leq} < 60 \text{ dBA}$	control measures may be used or warning clause
$60 < \text{Leq}$	control measures are required

L_{eq} is defined as the energy equivalent sound level during an hour.

Outdoor Living Areas (OLA) is defined as that portion of the outdoor amenity area of a dwelling for quiet enjoyment of the outdoor environment during the daytime period. OLA commonly includes backyards, balconies (with a minimum depth of 4m as per NPC-300), common outdoor living areas, and passive recreational areas. For the purpose of this study the amenity space identified on Drawing N101 is considered the only OLA for the Avalon Encore Stage 6 – Block 233. The point of assessment was chosen to be the middle of the amenity space as shown on Drawing N101.

2.1.2 Sound Level Criteria For Indoor Living/Dining Areas at Plane of Window (POW)



Robinson
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scale 1:10000	CLIENT: MINTO COMMUNITIES INC.	project no. 17099
date 06/03/18	TITLE: KEY PLAN	
drawn by JHB		FIG 1.0

Day-time Period: (16 hr) 07:00 to 23:00 55 dBA Leq

- | | |
|-------------------|--------------------------------------------------------------|
| 0 < Leq < 55 dBA | no measures are required |
| 55 < Leq < 65 dBA | provision for future A/C plus warning clause |
| 65 < Leq | mandatory A/C, building component design plus warning clause |

2.1.3 Sound Level Criteria for Indoor Bedroom at Plane of Window (POW)

Night-time Period: (8 hr) 23:00 to 07:00 50 dBA Leq

- | | |
|-------------------|--------------------------------------------------------------|
| 0 < Leq < 50 dBA | no measures are required |
| 50 < Leq < 60 dBA | provision for future A/C plus warning clause |
| 60 < Leq | mandatory A/C, building component design plus warning clause |

2.2 Attenuation Requirements

The Sound Level Limits as given in Section 2.1 could be more thoroughly described as:

- i. No control measures are required if the noise levels do not exceed the criteria for each location.
- ii. If the day-time outside living area (OLA) sound level exceeds 55 dBA by less than 5 dBA, the developer has two options:
 - a) Physical attenuation of noise; or
 - b) Include a noise warning clause on the affected dwelling units.
- iii. If the day-time outside living area (OLA) sound level exceeds 60 dBA then noise control measures are required to meet the criteria of 55 dBA.
- iv. If the night-time sound level at the outside wall exceeds Leq 50 dBA but is less than or equal to 60 dBA, or if the day-time sound level at the outside wall exceeds Leq 55 dBA but is less than or equal to 65 dBA, then provision for future installation of central air-conditioning is required. The appropriate notice(s) on title to this effect is to be included in all relevant Development Agreements.
- v. If the night-time sound level at the outside wall of a bedroom exceeds Leq 60 dBA, or if the day-time sound level at the outside wall of a living/dining room exceeds Leq 65 dBA then central air-conditioning is mandatory. The location and installation of the air-conditioner must comply with the noise criteria of NPC-216 and guidelines of Environmental Noise Guidelines for Installation of Residential Air-conditioning Equipment. Furthermore, building components (windows, doors and walls) must be specified and designed to reduce the indoor sound levels to 40 dBA for sleeping quarters and 45 dBA for living quarters. The appropriate notice(s) on title to this effect is to be included in all relevant Development Agreements.

3.0 ANALYSIS AND PROCEDURE

3.1 Noise Sources

The proposed development will be subjected to noise generated from the vehicular traffic travelling along Mer Bleue Road and Decoeur Drive. The site is located approximately 19 kilometres northeast of the McDonald-Cartier Airport and is outside the composite of both the 25 NEF/NEP) on the Airports design dated August 2005, and, therefore, no further assessment of aircraft noise is required.

3.2 Noise Levels Associated with Road Traffic

3.2.1 Traffic Information

	ROW Width (m)	Implied Roadway Class	AADT Veh/Day	Posted Speed Km/Hr	Day/Night Split % / %	Medium Trucks %	Heavy Trucks %
A	37.5-44.5	6-Lane Urban Arterial-Divided (6-UAD)	50,000	50-80	92/8	7	5
	34-37.5	4-Lane Urban Arterial-Divided (4-UAD)	35,000	50-80	92/8	7	5
	23-34	4-Lane Urban Arterial-Undivided (4-UAU)	30,000	50-80	92/8	7	5
	23-34	4-Lane Major Collector (4-UMCU)	24,000	40-60	92/8	7	5
B	30-35.5	2-Lane Rural Arterial (2-RAU)	15,000	50-80	92/8	7	5
	20-30	2-Lane Urban Arterial (2-UAU)	15,000	50-80	92/8	7	5
	20-30	2-Lane Major Collector (2-UMCU)	12,000	40-60	92/8	7	5
	30-35.5	2-Lane Outer Rural Arterial (near the extremities of the city)(2-RAU)	10,000	50-80	92/8	7	5
	20-30	2-Lane Urban Collector	8,000	40-50	92/8	7	5

A) Mer Bleue Road

- (i) R.O.W. Width 37.5 m.
- (ii) Roadway Class 4-Lane Urban Arterial - Divided
- (iii) Posted Speed Limit 60 km/hr
- (iv) Road Gradient 0 to 1.0 %
- (v) Road Pavement Type Typical Asphalt
- (vi) Topography Flat/Gentle Slope with barrier as required
- (vii) AADT 35,000 VPD

B) Decoeur Drive

- (i) R.O.W. Width 26 m.
- (ii) Roadway Class 2-Lane Major Collector
- (iii) Posted Speed Limit 50 km/hr

(iv)	Road Gradient	0 to 1.0 %
(v)	Road Pavement Type	Typical Asphalt
(vi)	Topography	Flat/Gentle Slope with barrier as required
(vii)	AADT	12,000 VPD

3.2.2 Alignment and Grade

The alignment and grades for Mer Bleue Road and Decoeur Drive are indicated on the attached drawing 17099-GR1 in Appendix C.

3.2.3 Noise Level Calculations

Calculations for roadway noise level predictions were completed using the Ministry of the Environment "STAMSON 5.02" computer software program.

In order to establish the projected noise levels affecting the site, the following assumptions were made:

Receiver Locations: For outdoor sound levels: 3.0m from facade and 1.5m above ground.

Centre-Line Off-Set: Mer Bleue Road to be a 37.5m right-of-way with the centre-line of the roadway being 18.75m from the property line.

Decoeur Drive to be a 26.0m right-of-way with the centreline of the roadway being 13.0m from the property line.

Minimum Setbacks: 6.0m rear-yard setback from the building to the property line.
4.5m front-yard setback from the building to the property line.
0.6m to 1.2m side-yard setback from the building to the property line.

Receiver Heights: *Terrace Homes*

First floor receiver height – 0.70m
(Bedroom)
Second floor receiver – 2.8m
(Living Room)
(Side Elevation – 3.6m)
Third floor receiver height – 5.8m
(Living Room)
(Side Elevation – 6.4m)
Fourth floor receiver – 8.7m
(Bedroom)

The predicted noise levels for the day-time and night-time periods were calculated for the receivers at the locations as shown on Drawing 17099-N101 in Appendix B.

3.2.4 Noise associated with stationary noise source

The closest existing commercial building with rooftop heating and cooling units is approximately 1.3km north on Mer Bleue Road. Given the location of the proposed development in relation to the noise source, there will be no additional impact to the noise analysis results.

Table 1
Location of Receiver

Receiver	Location	Distance to Centre-Line of Road Mer Bleue Road	Distance to Centre-Line of Road Decoeur Drive
R1	TE-1 Unit 229A/B; front outside Exterior wall/Bedroom window	27.8m	16.2m
R2	TE-2 Unit 205A/B; front outside Exterior wall/Bedroom window	65.5m	17.1m
R3	TE-2 Unit 202A/B; front outside Exterior wall/Bedroom window	52.7m	35.9m
R4	TE-6 Unit 222A/B; side outside Exterior wall/Bedroom window	34.2m	
R5	TE-3 Unit 207A/B; front outside Exterior wall/Bedroom window	60.4m	
R6	TE-4 Unit 211A/B; front outside Exterior wall/Bedroom window	60.5m	
R7	TE-5 Unit 218A/B; front outside Exterior wall/Bedroom window	23.8m	
R8	TE-5 Unit 214A/B; side outside Exterior wall/Bedroom window	34.2m	
R9	TE-5 Unit 214A/B; side outside Exterior wall/Bedroom window		74.5m
R10	TE-2 Unit 203A/B; front outside Exterior wall/Bedroom window		37.5m
R11	TE-4 Unit 210A/B; front outside Exterior wall/Bedroom window	60.4m	
R12	Outdoor Living Area – Amenity Area		31.0m

4.0 RESULTS OF CALCULATIONS AND DISCUSSION

Noise levels were determined for both day-time and night-time periods at eleven (11) different location as shown on Drawing 17099 - N101. As the noise levels will be the highest at these locations, the calculations represent the worst cases with respect to noise levels on the site. When required, the calculations were based on sound barriers being placed at the location assessed.

Table 2
Noise Levels Associated With Vehicular Traffic

Receiver I.D.	Location	Unattenuated Noise (dBA)	Attenuated Noise (dBA)
R1	TE-1 Unit 229A; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	67.96 60.24	
R1	TE-1 Unit 229B; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	68.25 60.95	
R2	TE-2 Unit 205A; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	65.61 57.89	
R2	TE-2 Unit 205B; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	65.88 58.57	
R3	TE-2 Unit 202A; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	58.66 50.82	
R3	TE-2 Unit 202B; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	59.22 52.18	
R4	TE-6 Unit 222A; side outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	62.51	
R4	TE-6 Unit 222B; side outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	54.60	
R5	TE-3 Unit 207A; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	56.06 48.22	
R5	TE-3 Unit 207B; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	56.62 49.56	
R6	TE-4 Unit 211A; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	53.92 46.07	
R6	TE-4 Unit 211B; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	57.59 50.80	
R7	TE-5 Unit 218A; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	68.41 60.66	
R7	TE-5 Unit 218B; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	68.79 61.56	
R8	TE-5 Unit 214A; side outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	62.76	
R8	TE-5 Unit 214B; side outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	54.82	
R9	TE-5 Unit 214A; side outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	51.63	
R9	TE-5 Unit 214B; side outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	43.47	
R10	TE-2 Unit 203A; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	56.66 48.84	
R10	TE-2 Unit 203B; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	57.17 50.09	
R11	TE-4 Unit 210A; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	53.92 46.07	
R11	TE-4 Unit 210B; front outside POW (DAY) Exterior wall/Bedroom window (NIGHT)	54.51 47.49	
R12	Outdoor Living Area – Amenity Area	66.99	60.40

Note: The reports generated by the STAMSON software may be found in Appendix A.

5.0 NOISE CONTROL MEASURES

5.1 Outdoor Measures

Predicted noise levels are expected to exceed the City of Ottawa and MOE criteria for daytime outdoor living area for the proposed amenity space adjacent to Mer Bleue Road. To address this a noise barrier will be required to protect the outdoor amenity area. Calculations indicate that a 2.5m high noise barrier will satisfactorily mitigate noise levels for the amenity area. Refer to the location on Drawing N101.

5.2 Indoor Measures

When noise levels at the building face of the units exceed 65 dBA (daytime) and/or 60 dBA (night-time) they require the mandatory installation of central air conditioning, a review of building components to achieve indoor sound level criteria (per Section 2.2(v)), and a Type C warning clause (clauses are detailed in Section 6.0). The affected units are summarized in Table 3 in Section 7.0.

TE-1 Unit 228 A/B, Unit 229 A/B, Unit 230 A/B, Unit 231 A/B
TE-2 Unit 200 A/B, Unit 205
TE-5 Unit 217 A/B, Unit 218 A/B, Unit 219 A/B
TE-6 Unit 223 A/B, Unit 224 A/B, Unit 225 A/B

In order to achieve the necessary reduction of the noise levels, the housing units within this project should be built in accordance with the ``Prescribed Measures – Building Components``

At other locations in the development, alternative means of ventilation are required as well as a Type B warning clause to be inserted into the Agreement of Purchase and Sale:

TE-1 Unit 226 A/B
TE-2 Unit 201 A/B, Unit 202 A/B, Unit 203 A/B, Unit 204 A/B
TE-3 Unit 206 A/B, Unit 207 A/B
TE-4 Unit 211 A/B
TE-5 Unit 214 A/B, Unit 216 A/B
TE-6 Unit 220 A/B, Unit 222 A/B

6.0 WARNING CLAUSES

The suggested wording of the warning clauses are as follows:

Type A "Purchasers/tenants are advised that despite the inclusion of noise control features in the development, sound levels due to increasing (road) (Transitway) (rail) (air) traffic may occasionally interfere with some outdoor activities as the sound levels exceed the City's and the Ministry of the Environment's noise criteria."

Type B "Purchasers/tenants are advised that despite the inclusion of noise control

features within the building units, sound levels due to increasing (road) (Transitway) (rail) (air) traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the City's and the Ministry of the Environment's noise criteria."

"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."

In addition to the above clause, it is recommended the builder choose the windows, walls and doors in such a way to meet the provincial noise standard.

Type C	<p>"Purchasers/tenants are advised that despite the inclusion of noise control features within the building units, sound levels due to increasing (road) (Transitway) (rail) (air) traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the City's and the Ministry of the Environment's noise criteria."</p> <p>"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."</p> <p>In addition to the above clause, it is recommended the builder choose the windows, walls and doors in such a way to meet the provincial noise standard.</p>
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7.0 RECOMMENDATIONS AND CONCLUSIONS

The foregoing Sections indicate that some of the units to be constructed in this development will be affected by vehicular traffic noise. The housing units are to be constructed with the building envelope capable of reducing the predicted night time noise to a level that would satisfy the M.O.E. guidelines. The proposed warning clauses and measures are summarized in the following Table 3.

Table 3
Warning Clause Requirements

Receiver I.D.	Location	Warning Clauses Required (Detailed In Section 6.0)	Mandatory A/C	Building Envelope Review
R1	TE-1 Unit 229A/B	C	Yes	Yes
R2	TE-2 Unit 205A/B	C	Yes	Yes
R3	TE-2 Unit 202A/B	B		

Table 3
Warning Clause Requirements

Receiver I.D.	Location	Warning Clauses Required (Detailed In Section 6.0)	Mandatory A/C	Building Envelope Review
R1	TE-1 Unit 229A/B	C	Yes	Yes
R2	TE-2 Unit 205A/B	C	Yes	Yes
R3	TE-2 Unit 202A/B	B		
R4	TE-6 Unit 222A/B	B		
R5	TE-3 Unit 207A/B	B		
R6	TE-4 Unit 211A/B	B		
R7	TE-5 Unit 218A/B	C	Yes	Yes
R8	TE-5 Unit 214A/B	B		
R10	TE-2 Unit 203A/B	B		
*Represented by results from R2	TE-1 Unit 228A/B TE-2 Unit 200A/B	C	Yes	Yes
*Represented by results from R3	TE-2 Unit 201A/B,	B		
*Represented by results from R4	TE-1 Unit 226A/B, TE-5 Unit 216A/B, TE-6 Unit 220A/B	B		
*Represented by results from R5	TE-3 Unit 206A/B	B		
*Represented by results from R7	TE-1 Unit 230A/B, 231A/B TE-5 Unit 217A/B, Unit 219A/B TE-6 Unit 223A/B, Unit 224A/B, Unit 225A/B	C	Yes	Yes
*Represented by results from R10	TE-2 Unit 204A/B	B		

Prepared By:



John Burns
Senior Designer

Reviewed By:



Sean M. Czaharynski, P.Eng.
Manager – Land Development



LICENSE # PROFESSIONAL ENGINEER
S. M. CZAHARYNSKI
JULY 2018
ONTARIO

Appendix A

Noise Analysis Results Stamson Reports

R1BOT
STAMSON 5.0 NORMAL REPORT Date: 22-02-2018 12:48:09
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r1_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 27.80 / 27.80 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Decoeur (day/night)

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Decoeur (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 : 16.20 / 16.20 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 64.21 + 0.00) = 64.21 dBA
Angle1 Angle2 Alpha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 -10 0.62 73.68 0.00 -4.34 -5.12 0.00 0.00 0.00 64.21

Segment Leq : 64.21 dBA

Results segment # 2: Decoeur (day)

Source height = 1.50 m

R1BOT

ROAD	(0.00 + 65.58 + 0.00) = 65.58	dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-90	90	0.62	67.51	0.00	-0.54	-1.39	0.00	0.00	0.00	65.58

Segment Leq : 65.58 dBA

Total Leq All Segments: 67.96 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD	(0.00 + 56.43 + 0.00) = 56.43	dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-90	-10	0.66	66.08	0.00	-4.45	-5.20	0.00	0.00	0.00	56.43

Segment Leq : 56.43 dBA

Results segment # 2: Decoeur (night)

Source height = 1.50 m

ROAD	(0.00 + 57.90 + 0.00) = 57.90	dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-90	90	0.66	59.91	0.00	-0.55	-1.46	0.00	0.00	0.00	57.90

Segment Leq : 57.90 dBA

Total Leq All Segments: 60.24 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 67.96
(NIGHT): 60.24

R1TOP
STAMSON 5.0 NORMAL REPORT Date: 22-02-2018 13:02:17
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r1_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 27.80 / 27.80 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Decoeur (day/night)

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Decoeur (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 : 16.20 / 16.20 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (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 -10 0.53 73.68 0.00 -4.10 -4.93 0.00 0.00 0.00 64.64

Segment Leq : 64.64 dBA

Results segment # 2: Decoeur (day)

Source height = 1.50 m

R1TOP

ROAD	(0.00 +	65.77	+ 0.00)	= 65.77	dBA					
Angl e1	Angl e2	Al pha	RefLLeq	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubLLeq
-90	90	0.53	67.51	0.00	-0.51	-1.23	0.00	0.00	0.00	65.77

Segment Leq : 65.77 dBA

Total Leq All Segments: 68.25 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD	(0.00 +	57.47	+ 0.00)	= 57.47	dBA					
Angl e1	Angl e2	Al pha	RefLLeq	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubLLeq
-90	-10	0.44	66.08	0.00	-3.87	-4.74	0.00	0.00	0.00	57.47

Segment Leq : 57.47 dBA

⁺ Results segment # 2: Decoeur (night)

Source height = 1.50 m

ROAD	(0.00 +	58.36	+ 0.00)	= 58.36	dBA					
Angl e1	Angl e2	Al pha	RefLLeq	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubLLeq
-90	90	0.44	59.91	0.00	-0.48	-1.07	0.00	0.00	0.00	58.36

Segment Leq : 58.36 dBA

Total Leq All Segments: 60.95 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.25
(NIGHT): 60.95

R2BOT
STAMSON 5.0 NORMAL REPORT Date: 22-02-2018 12:49:22
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r2_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -90.00 deg -40.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 65.50 / 65.50 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Decoeur (day/night)

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Decoeur (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 : 17.10 / 17.10 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 55.12 + 0.00) = 55.12 dBA
Angle1 Angle2 Alpha RefLep P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLep

-90 -40 0.62 73.68 0.00 -10.38 -8.18 0.00 0.00 0.00 55.12

Segment Lep : 55.12 dBA

Results segment # 2: Decoeur (day)

Source height = 1.50 m

R2BOT

ROAD	(0.00 + 65.20 + 0.00) = 65.20	dBA								
Angl e1	Angl e2	Al pha	RefLeq	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubLeq
-90	90	0.62	67.51	0.00	-0.92	-1.39	0.00	0.00	0.00	65.20

Segment Leq : 65.20 dBA

Total Leq All Segments: 65.61 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD	(0.00 + 47.13 + 0.00) = 47.13	dBA								
Angl e1	Angl e2	Al pha	RefLeq	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubLeq
-90	-40	0.66	66.08	0.00	-10.63	-8.32	0.00	0.00	0.00	47.13

Segment Leq : 47.13 dBA

Results segment # 2: Decoeur (night)

Source height = 1.50 m

ROAD	(0.00 + 57.51 + 0.00) = 57.51	dBA								
Angl e1	Angl e2	Al pha	RefLeq	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubLeq
-90	90	0.66	59.91	0.00	-0.94	-1.46	0.00	0.00	0.00	57.51

Segment Leq : 57.51 dBA

Total Leq All Segments: 57.89 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.61
(NIGHT): 57.89

R2TOP
STAMSON 5.0 NORMAL REPORT Date: 22-02-2018 12:49:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r2_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -90.00 deg -40.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 65.50 / 65.50 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Decoeur (day/night)

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Decoeur (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 : 17.10 / 17.10 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 56.02 + 0.00) = 56.02 dBA
Angle1 Angle2 Alpha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 -40 0.53 73.68 0.00 -9.80 -7.86 0.00 0.00 0.00 56.02

Segment Leq : 56.02 dBA

Results segment # 2: Decoeur (day)

Source height = 1.50 m

R2TOP

ROAD	(0.00 +	65.41	+ 0.00)	=	65.41	dBA				
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-90	90	0.53	67.51	0.00	-0.87	-1.23	0.00	0.00	0.00	65.41

Segment Leq : 65.41 dBA

Total Leq All Segments: 65.88 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD	(0.00 +	49.31	+ 0.00)	=	49.31	dBA				
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-90	-40	0.44	66.08	0.00	-9.24	-7.53	0.00	0.00	0.00	49.31

Segment Leq : 49.31 dBA

Results segment # 2: Decoeur (night)

Source height = 1.50 m

ROAD	(0.00 +	58.02	+ 0.00)	=	58.02	dBA				
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-90	90	0.44	59.91	0.00	-0.82	-1.07	0.00	0.00	0.00	58.02

Segment Leq : 58.02 dBA

Total Leq All Segments: 58.57 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.88
(NIGHT): 58.57

R3BOT
STAMSON 5.0 NORMAL REPORT Date: 22-02-2018 13:07:48
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r3_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -40.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 52.70 / 52.70 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Decoeur (day/night)

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Decoeur (day/night)

Angle1 Angle2 : 60.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 35.90 / 35.90 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 58.07 + 0.00) = 58.07 dBA
Angle1 Angle2 Alpha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq
-40 0 0.62 73.68 0.00 -8.85 -6.76 0.00 0.00 0.00 58.07

Segment Leq : 58.07 dBA

Results segment # 2: Decoeur (day)

Source height = 1.50 m

R3BOT

ROAD	(0.00 + 49.69 + 0.00) = 49.69	dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
60	90	0.62	67.51	0.00	-6.14	-11.68	0.00	0.00	0.00	49.69
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Segment Leq : 49.69 dBA

Total Leq All Segments: 58.66 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD	(0.00 + 50.25 + 0.00) = 50.25	dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-40	0	0.66	66.08	0.00	-9.06	-6.77	0.00	0.00	0.00	50.25
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Segment Leq : 50.25 dBA

Results segment # 2: Decoeur (night)

Source height = 1.50 m

ROAD	(0.00 + 41.72 + 0.00) = 41.72	dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
60	90	0.66	59.91	0.00	-6.29	-11.90	0.00	0.00	0.00	41.72
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Segment Leq : 41.72 dBA

Total Leq All Segments: 50.82 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 58.66
(NIGHT): 50.82

R3TOP
STAMSON 5.0 NORMAL REPORT Date: 22-02-2018 12:50:39
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r3_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -40.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 52.70 / 52.70 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Decoeur (day/night)

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Decoeur (day/night)

Angle1 Angle2 : 60.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 35.90 / 35.90 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 58.59 + 0.00) = 58.59 dBA
Angle1 Angle2 Alpha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-40 0 0.53 73.68 0.00 -8.36 -6.73 0.00 0.00 0.00 58.59

Segment Leq : 58.59 dBA

Results segment # 2: Decoeur (day)

Source height = 1.50 m

R3TOP

ROAD	(0.00 + 50.54 + 0.00)	= 50.54 dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
60	90	0.53	67.51	0.00	-5.80	-11.17	0.00	0.00	0.00	50.54

Segment Leq : 50.54 dBA

Total Leq All Segments: 59.22 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD	(0.00 + 51.50 + 0.00)	= 51.50 dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
-40	0	0.44	66.08	0.00	-7.88	-6.69	0.00	0.00	0.00	51.50

Segment Leq : 51.50 dBA

Results segment # 2: Decoeur (night)

Source height = 1.50 m

ROAD	(0.00 + 43.78 + 0.00)	= 43.78 dBA								
Angl e1	Angl e2	Al pha	RefL(eq)	P. Adj	D. Adj	F. Adj	W. Adj	H. Adj	B. Adj	SubL(eq)
60	90	0.44	59.91	0.00	-5.47	-10.66	0.00	0.00	0.00	43.78

Segment Leq : 43.78 dBA

Total Leq All Segments: 52.18 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.22
(NIGHT): 52.18

R4BOT
STAMSON 5.0 NORMAL REPORT Date: 11-07-2018 11:50:06
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r4_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : 0.00 deg 67.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 36.80 / 36.80 m
Receiver height : 3.60 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 62.51 + 0.00) = 62.51 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 67 0.60 73.68 0.00 -6.22 -4.94 0.00 0.00 0.00 62.51

Segment Leq : 62.51 dBA

Total Leq All Segments: 62.51 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 54.60 + 0.00) = 54.60 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 67 0.66 66.08 0.00 -6.47 -5.01 0.00 0.00 0.00 54.60

Segment Leq : 54.60 dBA

Total Leq All Segments: 54.60 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 62.51
(NIGHT): 54.60

R4TOP
STAMSON 5.0 NORMAL REPORT Date: 11-07-2018 12:17:59
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r4_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : 0.00 deg 67.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 36.80 / 36.80 m
Receiver height : 6.40 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 62.92 + 0.00) = 62.92 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 67 0.51 73.68 0.00 -5.90 -4.86 0.00 0.00 0.00 62.92

Segment Leq : 62.92 dBA

Total Leq All Segments: 62.92 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 54.60 + 0.00) = 54.60 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 67 0.66 66.08 0.00 -6.47 -5.01 0.00 0.00 0.00 54.60

Segment Leq : 54.60 dBA

Total Leq All Segments: 54.60 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 62.92
(NIGHT): 54.60

R5BOT
STAMSON 5.0 NORMAL REPORT Date: 11-07-2018 12:21:25
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r5_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -11.00 deg 20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 61.50 / 61.50 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 56.06 + 0.00) = 56.06 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-11 20 0.62 73.68 0.00 -9.93 -7.68 0.00 0.00 0.00 56.06

Segment Leq : 56.06 dBA

Total Leq All Segments: 56.06 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 48.22 + 0.00) = 48.22 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-11 20 0.66 66.08 0.00 -10.17 -7.68 0.00 0.00 0.00 48.22

Segment Leq : 48.22 dBA

Total Leq All Segments: 48.22 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.06
(NIGHT): 48.22

R5TOP
STAMSON 5.0 NORMAL REPORT Date: 11-07-2018 12:22:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r5_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -11.00 deg 20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 61.50 / 61.50 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 56.62 + 0.00) = 56.62 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-11 20 0.53 73.68 0.00 -9.38 -7.67 0.00 0.00 0.00 56.62

Segment Leq : 56.62 dBA

Total Leq All Segments: 56.62 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 49.56 + 0.00) = 49.56 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-11 20 0.44 66.08 0.00 -8.85 -7.67 0.00 0.00 0.00 49.56

Segment Leq : 49.56 dBA

Total Leq All Segments: 49.56 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.62
(NIGHT): 49.56

STAMSON 5.0 NORMAL REPORT Date: 12-07-2018 06:50:20
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r6_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -35.00 deg -15.00 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 : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 53.92 + 0.00) = 53.92 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-35 -15 0.62 73.68 0.00 -9.93 -9.82 0.00 0.00 0.00 53.92

Segment Leq : 53.92 dBA

Total Leq All Segments: 53.92 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 46.07 + 0.00) = 46.07 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-35 -15 0.66 66.08 0.00 -10.17 -9.84 0.00 0.00 0.00 46.07

Segment Leq : 46.07 dBA

Total Leq All Segments: 46.07 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.92
(NIGHT): 46.07

R6TOP
STAMSON 5.0 NORMAL REPORT Date: 11-07-2018 12:24:30
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r6_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (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 : 61.50 / 61.50 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 57.59 + 0.00) = 57.59 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

30 90 0.53 73.68 0.00 -9.38 -6.70 0.00 0.00 0.00 57.59

Segment Leq : 57.59 dBA

Total Leq All Segments: 57.59 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 50.80 + 0.00) = 50.80 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

30 90 0.44 66.08 0.00 -8.85 -6.43 0.00 0.00 0.00 50.80

Segment Leq : 50.80 dBA

Total Leq All Segments: 50.80 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.59
(NIGHT): 50.80

R7BOT
STAMSON 5.0 NORMAL REPORT Date: 12-07-2018 07:34:47
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r7_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (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 : 26.00 / 26.00 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 68.41 + 0.00) = 68.41 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 90 0.62 73.68 0.00 -3.87 -1.39 0.00 0.00 0.00 68.41

Segment Leq : 68.41 dBA

Total Leq All Segments: 68.41 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 60.66 + 0.00) = 60.66 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 90 0.66 66.08 0.00 -3.97 -1.46 0.00 0.00 0.00 60.66

Segment Leq : 60.66 dBA

Total Leq All Segments: 60.66 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.41
(NIGHT): 60.66

R7TOP
STAMSON 5.0 NORMAL REPORT Date: 12-07-2018 07:35:16
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r7_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (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 : 26.00 / 26.00 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 68.79 + 0.00) = 68.79 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 90 0.53 73.68 0.00 -3.66 -1.23 0.00 0.00 0.00 68.79

Segment Leq : 68.79 dBA

Total Leq All Segments: 68.79 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 61.56 + 0.00) = 61.56 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 90 0.44 66.08 0.00 -3.45 -1.07 0.00 0.00 0.00 61.56

Segment Leq : 61.56 dBA

Total Leq All Segments: 61.56 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.79
(NIGHT): 61.56

R8BOT
STAMSON 5.0 NORMAL REPORT Date: 12-07-2018 06:56:47
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r8_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : 0.00 deg 80.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 37.80 / 37.80 m
Receiver height : 3.60 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 62.76 + 0.00) = 62.76 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 80 0.60 73.68 0.00 -6.41 -4.51 0.00 0.00 0.00 62.76

Segment Leq : 62.76 dBA

Total Leq All Segments: 62.76 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 54.82 + 0.00) = 54.82 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 80 0.66 66.08 0.00 -6.66 -4.60 0.00 0.00 0.00 54.82

Segment Leq : 54.82 dBA

Total Leq All Segments: 54.82 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 62.76
(NIGHT): 54.82

R8TOP
STAMSON 5.0 NORMAL REPORT Date: 12-07-2018 06:54:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r8_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : 0.00 deg 80.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 37.80 / 37.80 m
Receiver height : 6.40 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 63.22 + 0.00) = 63.22 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 80 0.51 73.68 0.00 -6.07 -4.39 0.00 0.00 0.00 63.22

Segment Leq : 63.22 dBA

Total Leq All Segments: 63.22 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 54.82 + 0.00) = 54.82 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 80 0.66 66.08 0.00 -6.66 -4.60 0.00 0.00 0.00 54.82

Segment Leq : 54.82 dBA

Total Leq All Segments: 54.82 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 63.22
(NIGHT): 54.82

R9BOT
STAMSON 5.0 NORMAL REPORT Date: 12-07-2018 07:17:33
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r9_bot.te Time Period: Day/Night 16/8 hours
Description:

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

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 79.00 / 79.00 m
Receiver height : 3.60 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Decoeur (day)

Source height = 1.50 m

ROAD (0.00 + 51.63 + 0.00) = 51.63 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 90 0.60 67.51 0.00 -11.52 -4.36 0.00 0.00 0.00 51.63

Segment Leq : 51.63 dBA

Total Leq All Segments: 51.63 dBA

Results segment # 1: Decoeur (night)

Source height = 1.50 m

ROAD (0.00 + 43.47 + 0.00) = 43.47 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 90 0.66 59.91 0.00 -11.98 -4.47 0.00 0.00 0.00 43.47

Segment Leq : 43.47 dBA

Total Leq All Segments: 43.47 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 51.63
(NIGHT): 43.47

STAMSON 5.0 NORMAL REPORT Date: 11-07-2018 12:27:49
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r9_top.te Time Period: Day/Night 16/8 hours
Description:

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

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 79.00 / 79.00 m
Receiver height : 6.40 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Decoeur (day)

Source height = 1.50 m

ROAD (0.00 + 52.38 + 0.00) = 52.38 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 90 0.51 67.51 0.00 -10.92 -4.21 0.00 0.00 0.00 52.38

Segment Leq : 52.38 dBA

Total Leq All Segments: 52.38 dBA

Results segment # 1: Decoeur (night)

Source height = 1.50 m

ROAD (0.00 + 43.47 + 0.00) = 43.47 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

0 90 0.66 59.91 0.00 -11.98 -4.47 0.00 0.00 0.00 43.47

Segment Leq : 43.47 dBA

Total Leq All Segments: 43.47 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 52.38
(NIGHT): 43.47

R10BOT
STAMSON 5.0 NORMAL REPORT Date: 22-02-2018 14:32:56
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r10bot.te Time Period: Day/Night 16/8 hours
Description:

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

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 37.50 / 37.50 m
Receiver height : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Decoeur (day)

Source height = 1.50 m

ROAD (0.00 + 56.66 + 0.00) = 56.66 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 0 0.62 67.51 0.00 -6.45 -4.40 0.00 0.00 0.00 56.66

Segment Leq : 56.66 dBA

Total Leq All Segments: 56.66 dBA

Results segment # 1: Decoeur (night)

Source height = 1.50 m

ROAD (0.00 + 48.84 + 0.00) = 48.84 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 0 0.66 59.91 0.00 -6.61 -4.47 0.00 0.00 0.00 48.84

Segment Leq : 48.84 dBA

Total Leq All Segments: 48.84 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.66
(NIGHT): 48.84

R10TOP
STAMSON 5.0 NORMAL REPORT Date: 22-02-2018 14:32:21
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r10top.te Time Period: Day/Night 16/8 hours
Description:

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

Car traffic volume : 9715/845 veh/TimePeriod
Medium truck volume : 773/67 veh/TimePeriod
Heavy truck volume : 552/48 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 37.50 / 37.50 m
Receiver height : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Decoeur (day)

Source height = 1.50 m

ROAD (0.00 + 57.17 + 0.00) = 57.17 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 0 0.53 67.51 0.00 -6.09 -4.24 0.00 0.00 0.00 57.17

Segment Leq : 57.17 dBA

Total Leq All Segments: 57.17 dBA

Results segment # 1: Decoeur (night)

Source height = 1.50 m

ROAD (0.00 + 50.09 + 0.00) = 50.09 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 0 0.44 59.91 0.00 -5.75 -4.08 0.00 0.00 0.00 50.09

Segment Leq : 50.09 dBA

Total Leq All Segments: 50.09 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.17
(NIGHT): 50.09

R11BOT
STAMSON 5.0 NORMAL REPORT Date: 11-07-2018 12:35:36
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r11_bot.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -35.00 deg -15.00 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 : 2.80 / 0.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 53.92 + 0.00) = 53.92 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-35 -15 0.62 73.68 0.00 -9.93 -9.82 0.00 0.00 0.00 53.92

Segment Leq : 53.92 dBA

Total Leq All Segments: 53.92 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 46.07 + 0.00) = 46.07 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-35 -15 0.66 66.08 0.00 -10.17 -9.84 0.00 0.00 0.00 46.07

Segment Leq : 46.07 dBA

Total Leq All Segments: 46.07 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.92
(NIGHT): 46.07

R11TOP
STAMSON 5.0 NORMAL REPORT Date: 12-07-2018 06:52:03
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r11_top.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (day/night)

Angle1 Angle2 : -35.00 deg -15.00 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 : 5.80 / 8.70 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 54.51 + 0.00) = 54.51 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-35 -15 0.53 73.68 0.00 -9.38 -9.78 0.00 0.00 0.00 54.51

Segment Leq : 54.51 dBA

Total Leq All Segments: 54.51 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 47.49 + 0.00) = 47.49 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-35 -15 0.44 66.08 0.00 -8.85 -9.74 0.00 0.00 0.00 47.49

Segment Leq : 47.49 dBA

Total Leq All Segments: 47.49 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.51
(NIGHT): 47.49

R12AMM
STAMSON 5.0 NORMAL REPORT Date: 11-07-2018 10:18:11
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r10amme.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (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 : 31.00 / 31.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

ROAD (0.00 + 66.99 + 0.00) = 66.99 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 90 0.66 73.68 0.00 -5.23 -1.46 0.00 0.00 0.00 66.99

Segment Leq : 66.99 dBA

Total Leq All Segments: 66.99 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

ROAD (0.00 + 59.39 + 0.00) = 59.39 dBA
Angle1 Angle2 Al pha RefLeq P. Adj D. Adj F. Adj W. Adj H. Adj B. Adj SubLeq

-90 90 0.66 66.08 0.00 -5.23 -1.46 0.00 0.00 0.00 59.39

Segment Leq : 59.39 dBA

Total Leq All Segments: 59.39 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.99
(NIGHT): 59.39

R12AMMBA
STAMSON 5.0 NORMAL REPORT Date: 12-07-2018 07:23:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

File name: r12ammba.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Mer Bleue (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod
Medium truck volume : 2254/196 veh/TimePeriod
Heavy truck volume : 1610/140 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Mer Bleue (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 : 31.00 / 31.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 6.60 / 6.60 m
Source elevation : 87.78 m
Receiver elevation : 88.20 m
Barrier elevation : 88.10 m
Reference angle : 0.00

Results segment # 1: Mer Bleue (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)

1.50 ! 1.50 ! 1.51 ! 89.61

ROAD (0.00 + 60.40 + 0.00) = 60.40 dBA

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

-90 90 0.51 73.68 0.00 -4.76 -1.19 0.00 0.00 -7.32 60.40

Segment Leq : 60.40 dBA

Total Leq All Segments: 60.40 dBA

Results segment # 1: Mer Bleue (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)

R12AMMBA

1. 50 !	1. 50 !	1. 51 !	89. 61
ROAD (0. 00 + 52. 81 + 0. 00) = 52. 81 dBA			
Angl e1	Angl e2	AI pha	RefLLeq
-90	90	0. 51	66. 08
P. Adj	D. Adj	F. Adj	W. Adj
0. 00	-4. 76	-1. 19	0. 00
H. Adj	B. Adj	SubLLeq	
0. 00	-7. 32	52. 81	

Segment Leq : 52. 81 dBA

Total Leq All Segments: 52. 81 dBA

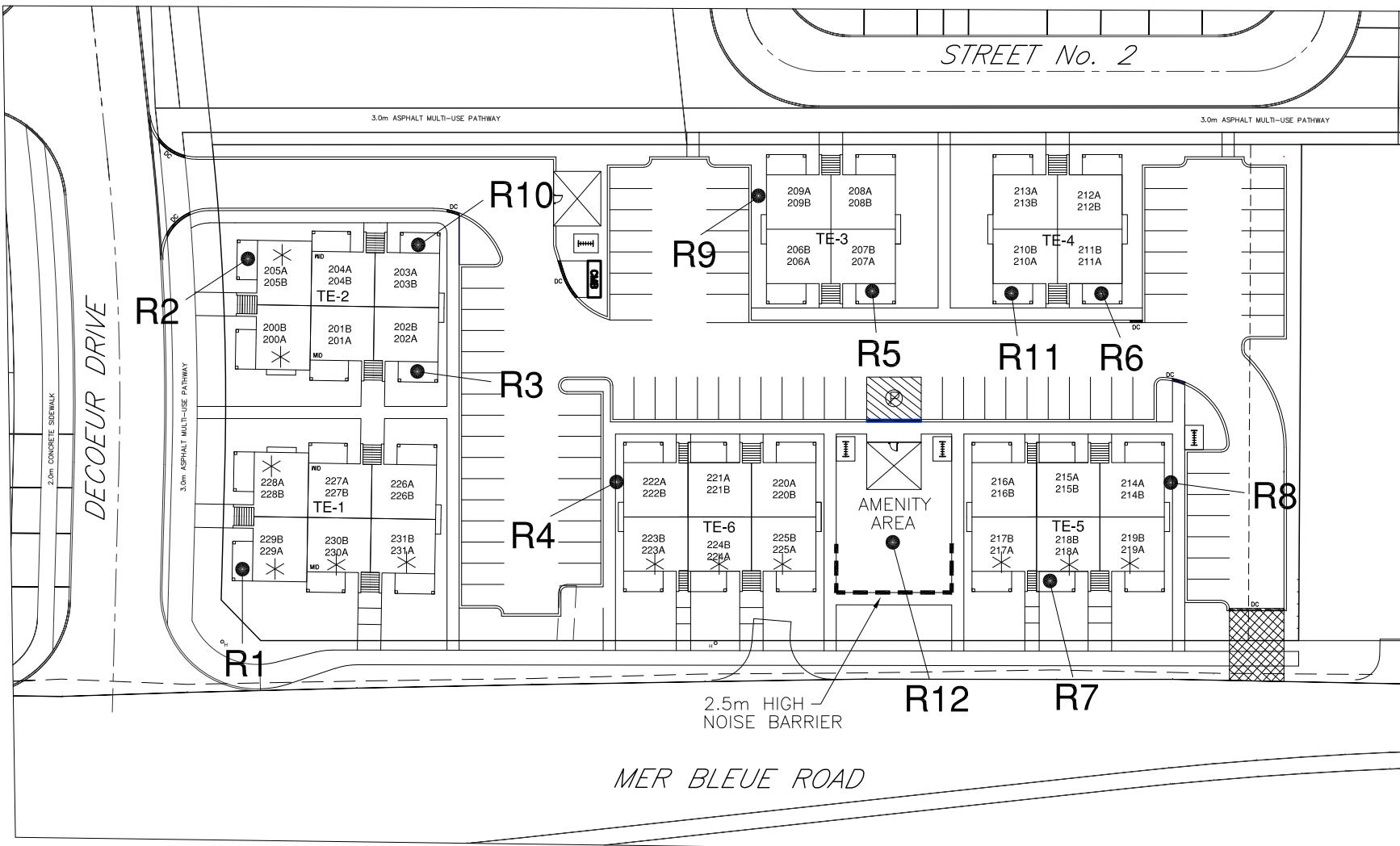
TOTAL Leq FROM ALL SOURCES (DAY): 60. 40
(NIGHT): 52. 81

Appendix B

Drawing 17099–N101 Noise Analysis Site Plan

LEGEND

- R11 • RECEIVER LOCATION AND ID
- * UNITS REQUIRING CENTRAL AIR CONDITIONING
- 1.) REFER TO GRADING PLAN 17099-GR1 FOR GRADING DETAILS
 - 2.) TYPICAL BALCONY SIZES ARE 4.8m WIDE x 2.5m DEEP

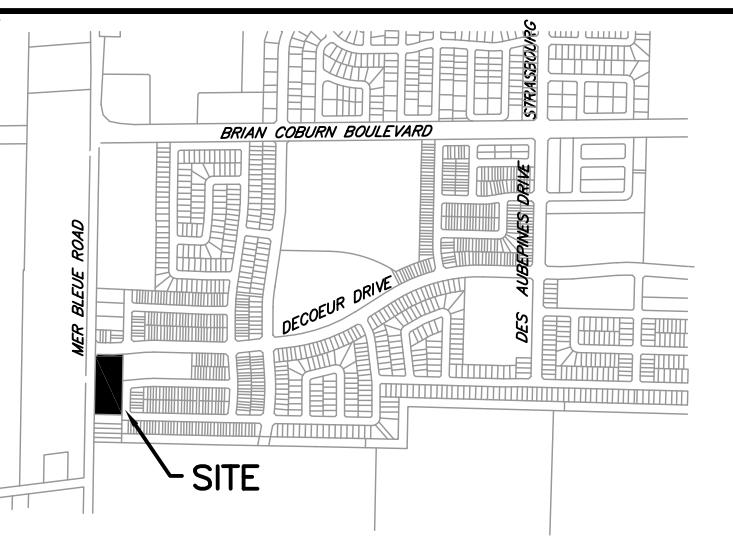


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2.	REVISED AS PER CITY COMMENTS	JUL 12/18	SMC	scale 1:750	CLIENT: AVALON ENCORE STAGE 6 – BLOCK 233	project no. 17099
1.	ISSUED FOR APPROVAL	MAR 15/18	SMC	date 15/03/18	TITLE: ENVIRONMENTAL NOISE IMPACT ASSESSMENT SITE PLAN	
No.	REVISION	DATE	BY	drawn by JHB		N101

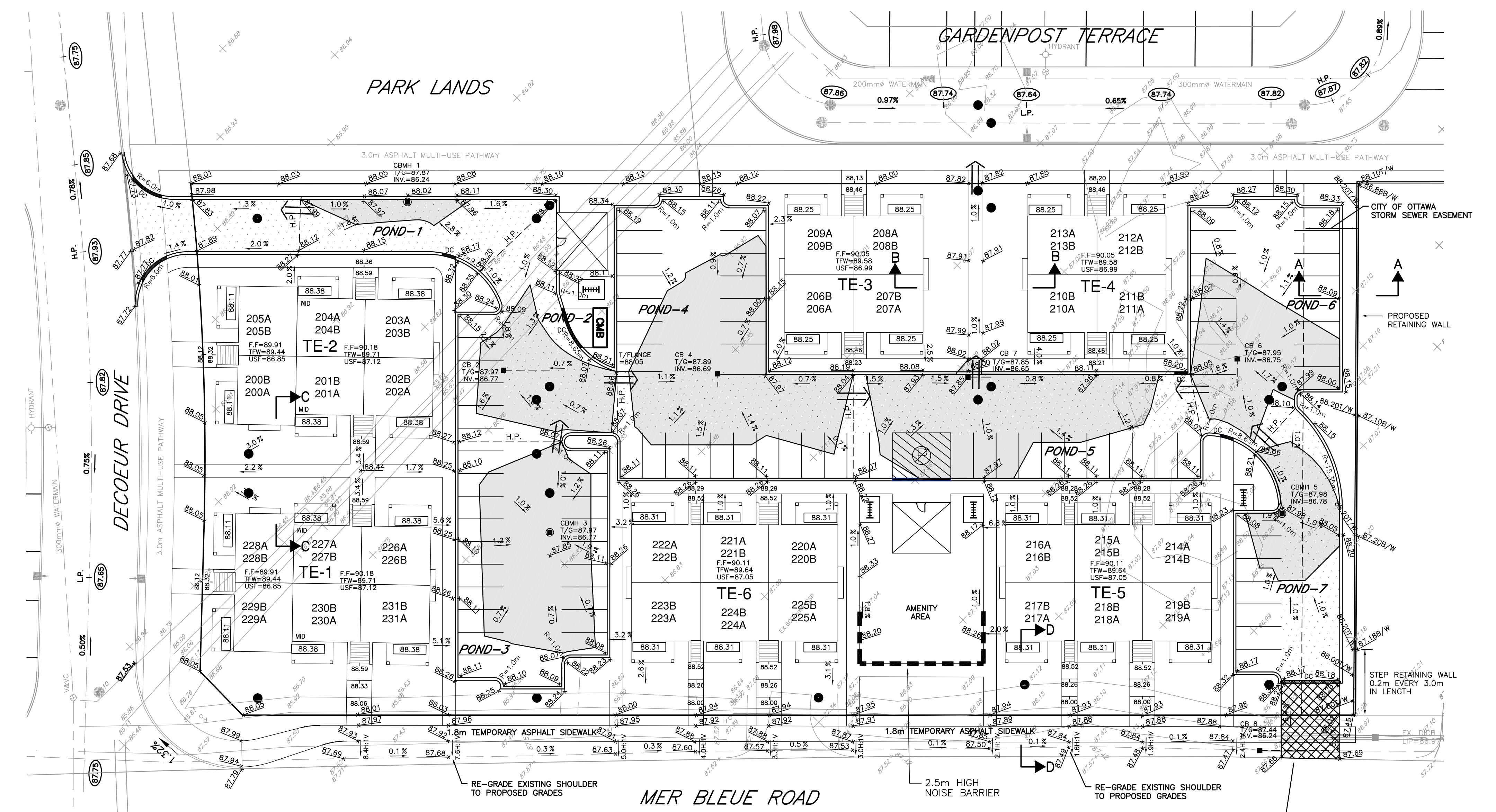
Appendix C

Drawing 17099-GR1 Grading Plan

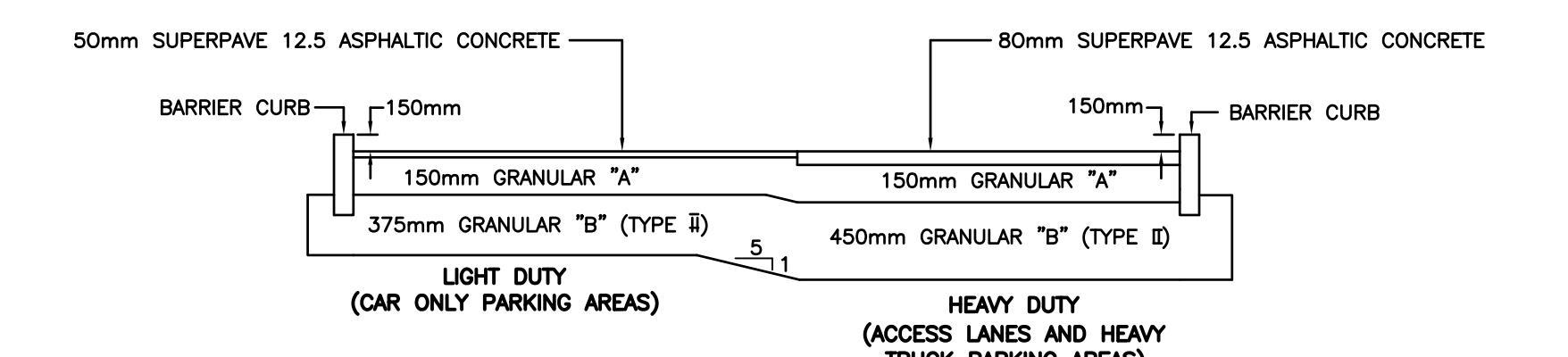


LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED HYDRANT WITH VALVE AND VALVE BOX
- EXISTING EDGE OF PAVEMENT
- SWALE
- 100 YEAR PONDING LIMIT
- CATCHBASIN MANHOLE
- CATCHBASIN
- PROPOSED TERRACE GRADE OR CENTRELINE ROAD GRADE
- PROPOSED DRIVEWAY GRADE AT GARAGE
- PROPOSED GRADE
- EXISTING ELEVATION
- DRAINAGE SLOPE AND DIRECTION
- OVERLAND FLOW ROUTE

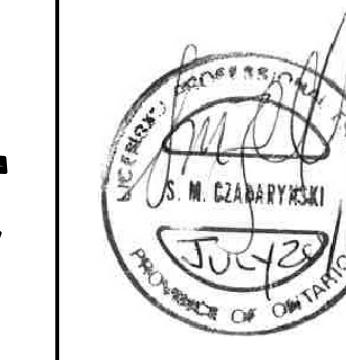


PONDING AREA TABLE							
LOCATION	STRUCTURE #	ICD TYPE	MAXIMUM PONDING ELEVATION	TOP OF GRADE ELEVATION	MAXIMUM PONDING DEPTH (m)	FLOW (L/s)	100 YEAR VOLUME (m³)
							ORIFICE DIA (mm)
POND-1	CBMH 1	TEMPEST MHF	87.99	87.87	0.12	18.0	1.3
POND-2	CB 2	TEMPEST MHF	88.06	87.97	0.09	13.5	4.2
POND-3	CBMH 3	TEMPEST MHF	88.07	87.97	0.10	16.7	9.1
POND-4	CB 4	TEMPEST MHF	88.04	87.89	0.15	13.2	19.6
POND-5	CB 7	TEMPEST MHF	88.02	87.85	0.17	25.0	16.0
POND-6	CB 6	TEMPEST MHF	88.05	87.95	0.10	13.2	6.5
POND-7	CBMH 5	TEMPEST MHF	88.06	87.98	0.08	17.0	3.0



NOTES
THE POSITION OF ALL POLE LINES, CONDUITS, WATERLINES, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

SCALE			
HORIZ. 1:300			
3m	6m	12m	
2	REVISED PER CITY COMMENTS	19/07/18	SMC
1	ISSUED FOR SITE PLAN APPLICATION	19/03/18	SMC
NO.	REVISION DESCRIPTION	DATE	BY



Robinson
Land Development

350 PALLADIUM DRIVE
KANATA, ONTARIO K2V 1A8
TELEPHONE (613) 592-6060

AVALON ENCORE STAGE 6
BLOCK 233

MINTO COMMUNITIES INC.
200-180 KENT STREET,
OTTAWA, ONTARIO, K1P 0B6

PROJECT NO.
17099
SURVEY
RLD
DRAWN
JHB
CHECKED
SMC
APPROVED
SMC
DRAFTED
MARCH 2018
DWG. NO:
17099-GR

GRADING and DRAINAGE PLAN

#17617