PATERSON GROUP

Environmental Noise Control Study
Proposed Commercial Building

2026 Carp Road
Ottawa, Ontario

Prepared for 417 Auto Sales

Report PG6275-1 dated August 25, 2022

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Appendices

1.0 Introduction

Paterson Group (Paterson) was commissioned by 417 Auto Sales to conduct an environmental noise control study for the proposed commercial building to be located at 2026 Carp Road, in the City of Ottawa.

The objective of the current study is to:

- Determine the primary noise sources impacting the site and compare the projected sound levels to guidelines set out by the Ministry of Environment and Climate Change (MOECC) and the City of Ottawa.

- Review the projected noise levels and offer recommendations regarding warning classes, construction materials or alternative sound barriers.

The following report has been prepared specifically and solely for the aforementioned project which is described herein. It contains our findings and includes acoustical recommendations pertaining to the design and construction of the subject development as they are understood at the time of writing this report.

This study has been conducted according to City of Ottawa document - Engineering Noise Control Guidelines (ENCG), dated January 2016, and the Ontario Ministry of the Environment Guideline NPC-300.

2.0 Proposed Development

It is understood that the proposed development will consist of a one-storey commercial building which rises approximately 3 m above grade. Associated walkways, driveways, parking areas, and landscaped areas are further anticipated. No outdoor living area was identified on the proposed site plan.

3.0 Methodology and Noise Assessment Criteria

The City of Ottawa outlines three (3) sources of environmental noise that must be analyzed separately:

- Surface Transportation Noise
- Stationary Noise
  - new noise-sensitive development applications (noise receptors) in proximity to existing or approved stationary sources of noise, and
  - new stationary sources of noise (noise generating) in proximity to existing or approved noise-sensitive developments
- Aircraft Noise

Surface Transportation Noise

Surface roadway traffic noise, equivalent to sound level energy L_{eq}, provides a measure of the time varying noise level over a period of time. For roadways, the L_{eq} is commonly calculated on the basis of 16-hour (L_{eq16}) daytime (07:00-23:00) and 8-hour (L_{eq8}) nighttime (23:00-7:00) split to assess its impact on residential, commercial and institutional buildings.

The City of Ottawa's Official Plan dictates that the influence area must contain any of following conditions to classify as a surface transportation noise source for a subject site:

- Within 100 m of the right-of-way of an existing or proposed arterial, collector or major collector road; a light rail transit corridor; bus rapid transit, or transit priority corridor
- Within 250 m of the right-of-way for an existing or proposed highway or secondary rail line
- Within 300 m from the right of way of a proposed or existing rail corridor or a secondary main railway line
- Within 500 m of an existing 400 series provincial highway, freeway or principle main railway line.

The Environmental Noise Guidelines for Stationary and Transportation Sources – NPC-300 outlines the limitations of noise levels in relation to the location of the receptors. These can be found in the following tables:

Table 1 – Noise Level Limit for Outdoor Living Areas

Time Period	L_{eq} Level (dBA)
Daytime, 7:00-23:00	55

- Standard taken from Table 2.2a; Sound Level Limit for Outdoor Living Areas – Road and Rail

Table 2 – Noise Level Limits for Indoor Living Areas

Type of Space	Time Period	L_{eq} Level (dBA)	
		Road	Rail
General offices, reception areas, retail stores, etc.	Daytime 7:00-23:00	50	45
Theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	Daytime 7:00-23:00	45	40
Living/dining/den areas of **residences**, hospitals, nursing/retirement homes, schools, day-care centres	Daytime 7:00-23:00	45	40
Living/dining/den areas of **residences**, hospitals, nursing/retirement homes etc. (except schools or day-care centres)	Nighttime 23:00-7:00	45	40
Sleeping quarters of hotels/motels	Nighttime 23:00-7:00	45	40
Sleeping quarters of **residences**, hospitals, nursing/retirement homes, etc.	Nighttime 23:00-7:00	40	35

- Standards taken from Table 2.2b, Sound Level Limit for Indoor Living Areas – Road and Rail and Table 2.2c, Supplementary Sound Level Limits for Indoor Spaces – Road and Rail

Predicted noise levels at the pane of window dictate the action required to achieve recommended noise levels. It is noted in ENCG that the limits outlined in Table 2 are for the noise levels on the interior of the window glass pane. An open window is considered to provide a 10 dBA noise reduction, while a standard closed window is capable to provide a minimum 20 dBA noise reduction. The noise level limit of commercial building is 50 dBA daytime. Therefore, where noise levels exceed 60 dBA daytime, the ventilation for the building should consider the provision for central air conditioning. Where noise levels exceed 70 dBA daytime, central air conditioning will be required, and the building components will require higher levels of sound attenuation.

When the noise levels are equal to or less than the specified criteria, no noise attenuation (control) measures are required.

Noise attenuation (control) measures include any or all of the following:

- Noise attenuation barrier
- Provisions for the installation of central air conditioning
- Central air conditioning
- Architectural components designed to provide additional acoustic insulation

In addition to the implementation of noise attenuation features, if required, the following Warning Clauses may be recommended to advise the prospective purchasers / tenants of affected units of potential environmental noise problem:

Table 3 – Warning Clauses for Indoor Living Areas (Commercial Building)

Leq (dBA)	Warning Clause	Description
55 dBA < $L_{eq(16)}$ ≤ 65 dBA	Warning Clause Type C	"This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."
65 dBA < $L_{eq(16)}$	Warning Clause 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 sound level limits of the Municipality and the Ministry of the Environment."

- Clauses taken from section C8 Warning Clauses; Environmental Noise Guidelines for Stationary and Transportation Sources - NPC-300

Stationary Noise

Stationary noise sources include sources or facilities that are fixed or mobile and can cause a combination of sound and vibration levels emitted beyond the property line. These sources may include commercial air conditioner units, generators and fans. Facilities that may contribute to stationary noise may include car washes, snow disposal sites, transit stations and manufacturing facilities.

The subject site is not in proximity to existing or approved stationary sources of noise. Therefore, a stationary noise analysis will not be required.

Aircraft / Airport Noise

The subject site is not located within the Airport Vicinity Development Zone. Therefore this project will not require an aircraft/airport noise analysis. No warning clauses regarding aircraft or airport noise will be required.

4.0 Analysis

Surface Transportation Noise

The subject development is bordered to the north and east by residential dwellings and commercial buildings followed by Lloydalex Crescent, and to the south and west by Carp Road. Lloydalex Crescent and Carp Road are identified within the 100 m radius of proposed development.

Based on the City of Ottawa's Official Plan, Schedule E, Carp Road is considered a 2-lane urban arterial road (2-UAU). Other roads within the 100 m radius of the proposed development are not classified as either arterial, collector or major collector roads and therefore are not included in this study. The major source of traffic noise is due to the Carp Road to the southwest of the proposed development.

All noise sources are presented in Drawing PG6275-3 - Site Geometry located in Appendix 1.

The noise levels from road traffic are provided by the City of Ottawa, taking into consideration the right-of-way width and the implied roadway classification. It is understood that these values represent the maximum allowable capacity of the proposed roadways. The parameters to be used for sound level predictions can be found below.

Table 4 – Traffic and Road Parameters

Segment	Roadway Classification	AADT Veh/Day	Speed Limit (km/h)	Day/Night Split %	Medium Truck %	Heavy Truck %
Carp Road	2-UAU	15000	60	92/8	7	5

- Data obtained from the City of Ottawa document ENCG

One (1) level of reception points was selected for this analysis. The following elevation was selected from the heights provided on the survey plan for the subject building.

Table 5 – Elevations of Reception Points			
Floor Number	**Elevation at Centre of Window (m)**	**Floor Use**	**Daytime / Nighttime Analysis**
First Floor	1.5	Commercial	Daytime

For this analysis, a reception point was taken at the centre of the first floor. Reception points are detailed on Drawing PG6275-2 - Receptor Locations presented in Appendix 1.

All horizontal distances have been measured from the reception point to the edge of the right-of-way. The roadway was analyzed where it intersected the 100 m buffer zone, which is reflected in the local angles described in Paterson Drawings PG6275-3A to 3C - Site Geometry in Appendix 1.

Table 7 - Summary of Reception Points and Geometry, located in Appendix 1, provides a summary of the points of reception and their geometry with respect to the noise sources. The analysis is completed so that no effects of sound reflection off of the building facade are considered, as stipulated by the ENGC.

The subject site is sloping down to the east and at grade with the neighbouring roads within the 100 m radius.

The analysis was completed using STAMSON version 5.04, a computer program which uses the road and rail traffic noise prediction methods using ORNAMENT (Ontario Road Noise Analysis Method for Environment and Transportation) and STEAM (Sound from Trains Environment Analysis Method), publications from the Ontario Ministry of Environment and Energy.

5.0 Results

Surface Transportation Noise

The primary descriptors are the 16-hour daytime (7:00-23:00) and the 8-hour nighttime (23:00-7:00) equivalent sound levels, $L_{eq(16)}$ and $L_{eq(8)}$ for City roads.

The exterior noise levels due to roadway traffic sources were analyzed with the STAMSON version 5.04 software at all reception points. The input and output data of the STAMSON modeling can be found in Appendix 2, and the summary of the results can be found in Table 6.

Table 6: Exterior Noise Levels due to Roadway Traffic Sources

Reception Point	Height Above Grade (m)	Receptor Location	Daytime $L_{eq(16)}$ (dBA)	Nighttime $L_{eq(8)}$ (dBA)
REC 1-1	1.5	Southwestern Elevation, 1st Floor	68	61
REC 2-1	1.5	Northwestern Elevation, 1st Floor	65	58
REC 3-1	1.5	Southeastern Elevation, 1st Floor	65	58

6.0 Discussion and Recommendations

6.1 Outdoor Living Areas

No outdoor living areas were identified for this development.

6.2 Indoor Living Areas and Ventilation

The results of the STAMSON modeling indicate that the noise levels at proposed commercial building will range between 65 dBA and 68 dBA during the daytime period (07:00-23:00). The noise levels on the southwestern, northwestern, and southeastern elevations of proposed commercial building will exceed the limit for the exterior of the pane of glass (55 dBA) specified by the ENCG. Therefore, units on the southwestern, northwestern, and southeastern elevations of this commercial building should be designed with a central air conditioning unit, along with the warning clause Type D, as outlined in Table 3. It is also noted that the results of STAMSON modeling indicate that the noise levels will be below 70 dBA, and therefore standard building materials are acceptable to provide adequate soundproofing.

7.0 Summary of Findings

The subject site is located at 2026 Carp Road, in the City of Ottawa. It is understood that the proposed development will consist of a one-storey commercial building. The building will rise 3 metres above grade. There is a single major source of surface transportation noise to the proposed development: Carp Road.

It is noted that there is no outdoor living area at this development.

Several reception points were selected for the surface transportation noise analysis, consisting of the centre of first level. The results of STAMSON modeling indicate that the southwestern, northwestern, and southeastern elevations of the proposed commercial building are expected to exceed the 65 dBA threshold specified by the ENCG. It is also noted that the noise levels at proposed building will be below 70 dBA. Therefore, the units should be designed to include a central air conditioning unit, along with a warning clause Type D on the southwestern, northwestern, and southeastern elevations of proposed building. It is also noted that the results of STAMSON modeling indicate that the noise levels will be below 70 dBA, and therefore standard building materials are acceptable to provide adequate soundproofing.

The following warning clause is to be included on all Offers of Purchase and Sale and/or lease agreements:

> "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 sound level limits of the Municipality and the Ministry of the Environment."

8.0 Statement of Limitations

The recommendations made in this report are in accordance with our present understanding of the project. Our recommendations should be reviewed when the project drawings and specifications are complete.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than 417 Auto Sales or their agent(s) is not authorized without review by this firm for the applicability of our recommendations to the altered use of the report.

Paterson Group Inc.

Yolanda Tang, M.A.Sc. Stephanie A. Boisvenue, P.Eng.

Report Distribution:

- ❑ 417 Auto Sales (email copy)
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APPENDIX 1

TABLE 7 - SUMMARY OF RECEPTION POINTS AND GEOMETRY

Drawing PG6275-1 - Site Plan

Drawing PG6275-2 - Receptor Location Plan

Drawing PG6275-3 - Site Geometry

Drawing PG6275-3A - Site Geometry (REC 1-1)

Drawing PG6275-3B - Site Geometry (REC 2-1)

Drawing PG6275-3C - Site Geometry (REC 3-1)

Table 7 - Summary of Reception Points and Geometry
2026 Carp Road

Point of Reception	Location	Leq Day (dBA)	Carp Road					
			Horizontal (m)	Vertical (m)	Total (m)	Local Angle (degree)	Number of Rows of Houses	Density (%)
REC 1-1	Southwestern Elevation, 1st Floor	68	15	1.5	15.1	-84, 84	n/a	n/a
REC 2-1	Northwestern Elevation, 1st Floor	65	15	1.5	15.1	0, 83	n/a	n/a
REC 3-1	Southeastern Elevation, 1st Floor	65	15	1.5	15.1	-82, 0	n/a	n/a

CARP ROAD

GRASSED

GRAVELED

GRASSED

GRASSED

EXISTING SEPTIC

EXISTING 1-STOREY DWELLING

INTERLOCK

2026 CARP ROAD

ASPHALTIC PARKING

SNOW STORAGE AREA

SCALE: 1:250

0 1 2 3 4 5 10 15m

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PATERSON GROUP
SOLUTION ORIENTED ENGINEERING

NO.	REVISIONS	DATE	INITIAL

417 AUTO SALES

NOISE ATTENUATION STUDY
PROPOSED COMMERCIAL BUILDING
2026 CARP ROAD

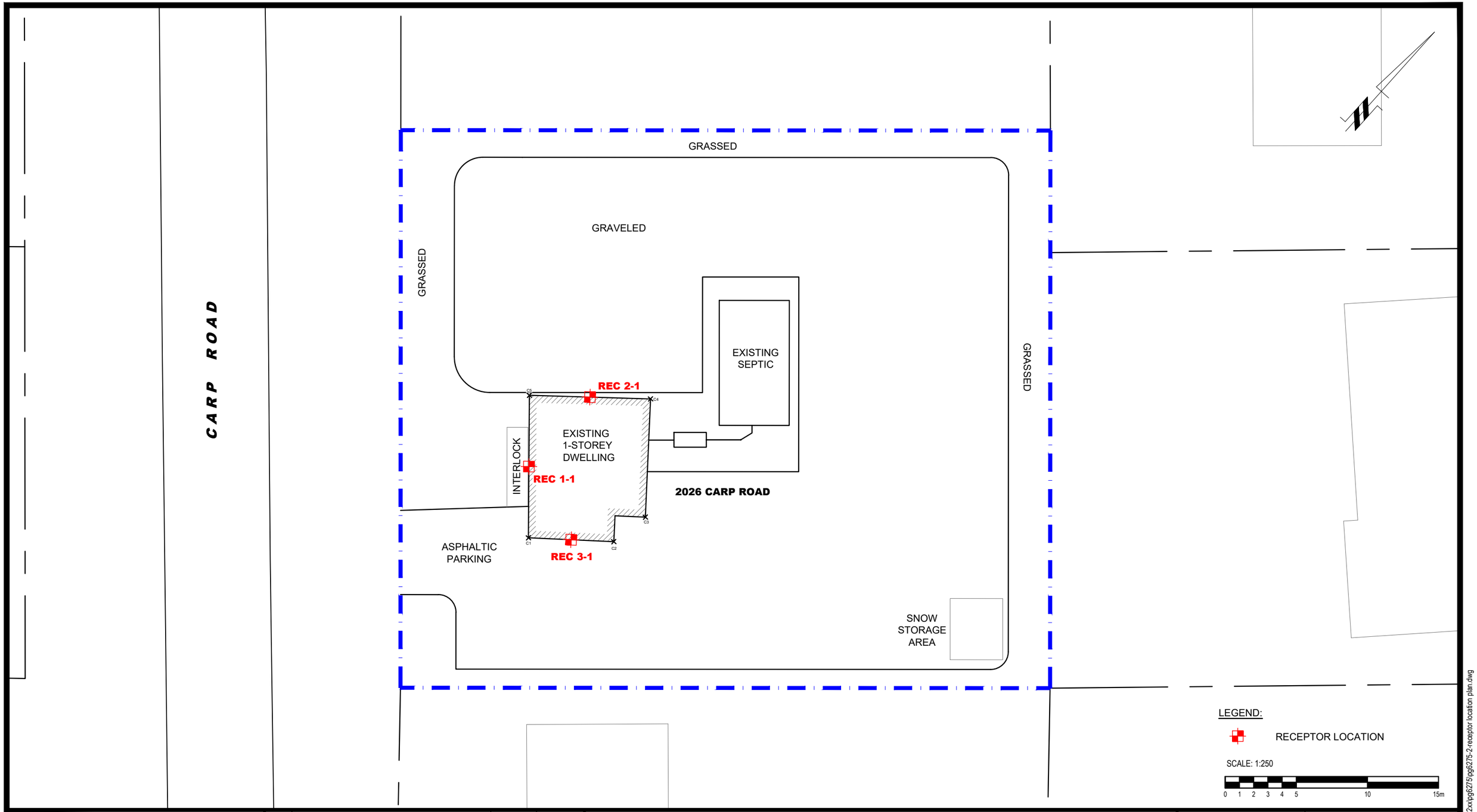
OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:250	Date: 07/2022
Drawn by: YA	Report No.: PG6275-1
Checked by: YT	Dwg. No.: PG6275-1
Approved by: SB	Revision No.:

11x17



PATERSON GROUP
SOLUTION ORIENTED ENGINEERING

NO.	REVISIONS	DATE	INITIAL

417 AUTO SALES

NOISE ATTENUATION STUDY
PROPOSED COMMERCIAL BUILDING
2026 CARP ROAD

OTTAWA, ONTARIO

Title:

RECEPTOR LOCATION PLAN

Scale: 1:250	Date: 07/2022
Drawn by: YA	Report No.: PG6275-1
Checked by: YT	Dwg. No.: PG6275-2
Approved by: SB	Revision No.:

11x17

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NOISE ATTENUATION STUDY
PROPOSED COMMERCIAL BUILDING
2026 CARP ROAD

OTTAWA, ONTARIO

Title:

SITE GEOMETRY

Scale: 1:1250	Date: 07/2022
Drawn by: YA	Report No.: PG6275-1
Checked by: YT	Dwg. No.: PG6275-3
Approved by: SB	Revision No.:

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NO.	REVISIONS	DATE	INITIAL

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NOISE ATTENUATION STUDY
PROPOSED COMMERCIAL BUILDING
2026 CARP ROAD

OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 1-1

Scale: 1:1250	Date: 07/2022
Drawn by: YA	Report No.: PG6275-1
Checked by: YT	Dwg. No.: PG6275-3A
Approved by: SB	Revision No.:

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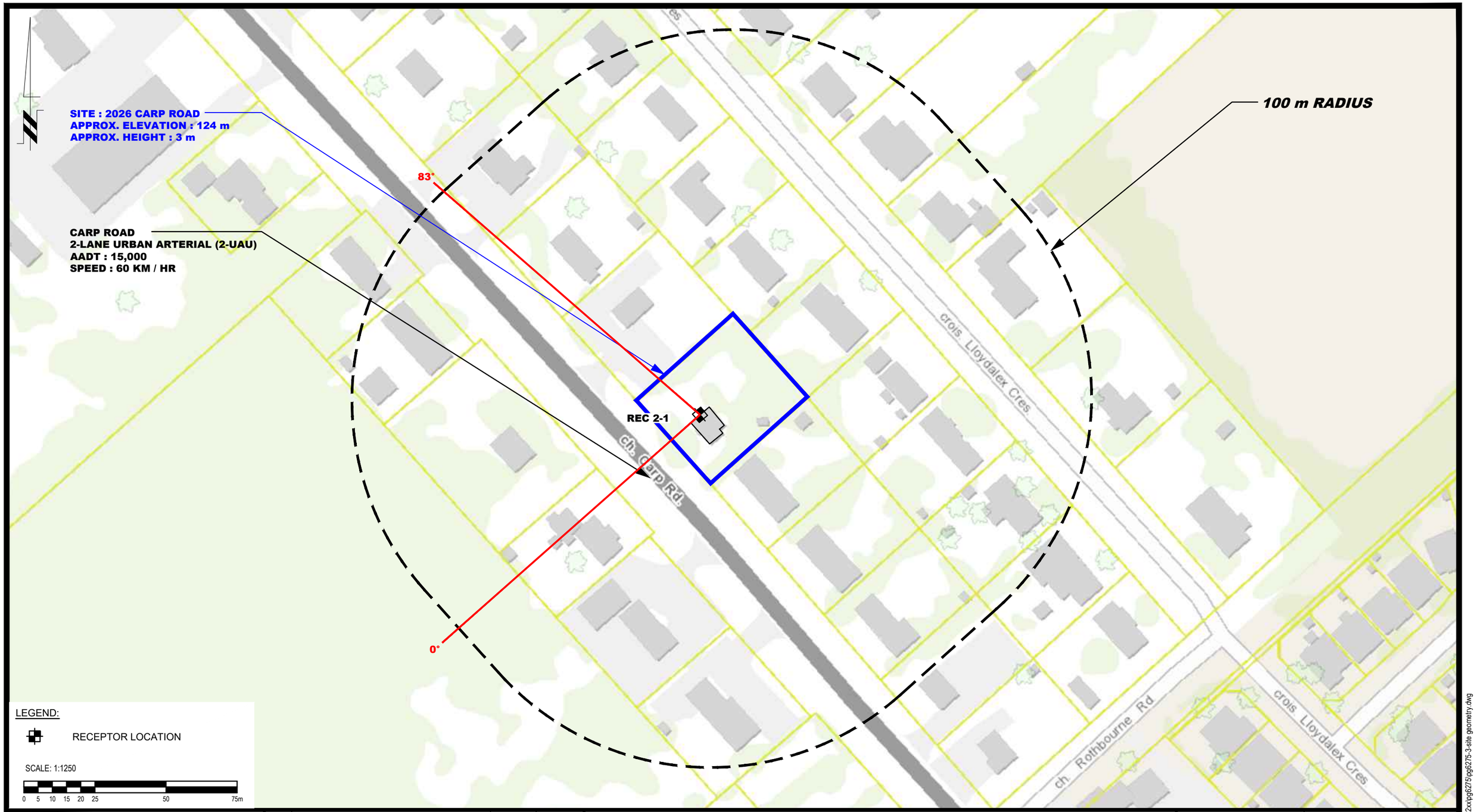

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NO.	REVISIONS	DATE	INITIAL

417 AUTO SALES

NOISE ATTENUATION STUDY
PROPOSED COMMERCIAL BUILDING
2026 CARP ROAD

OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 2-1

Scale: 1:1250	Date: 07/2022
Drawn by: YA	Report No.: PG6275-1
Checked by: YT	Dwg. No.: PG6275-3B
Approved by: SB	Revision No.:

11x17

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SITE : 2026 CARP ROAD
APPROX. ELEVATION : 124 m
APPROX. HEIGHT : 3 m

CARP ROAD
2-LANE URBAN ARTERIAL (2-UAU)
AADT : 15,000
SPEED : 60 KM / HR

100 m RADIUS

REC 3-1

0°

-82°

ch. Carp Rd.

crois. Lloydalex Cres.

ch. Rothbourne Rd

crois. Lloydalex Cres

LEGEND:

RECEPTOR LOCATION

SCALE: 1:1250

0 5 10 15 20 25 50 75m

PATERSON GROUP
SOLUTION ORIENTED ENGINEERING

NO.	REVISIONS	DATE	INITIAL

417 AUTO SALES

NOISE ATTENUATION STUDY
PROPOSED COMMERCIAL BUILDING
2026 CARP ROAD

OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 3-1

Scale: 1:1250	Date: 07/2022
Drawn by: YA	Report No.: PG6275-1
Checked by: YT	Dwg. No.: PG6275-3C
Approved by: SB	Revision No.:

11x17

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APPENDIX 2

STAMSON RESULTS

STAMSON 5.0 NORMAL REPORT Date: 20-07-2022 14:21:11
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec11.te Time Period: Day/Night 16/8 hours
Description: Receptor Point 1-1

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

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
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: Carp Rd (day/night)

Angle1 Angle2 : -84.00 deg 84.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Carp Rd (day)

Source height = 1.50 m

ROAD (0.00 + 68.48 + 0.00) = 68.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-84	84	0.66	70.00	0.00	0.00	-1.51	0.00	0.00	0.00	68.48

Segment Leq : 68.48 dBA

Total Leq All Segments: 68.48 dBA

↟
Results segment # 1: Carp Rd (night)

Source height = 1.50 m

ROAD (0.00 + 60.89 + 0.00) = 60.89 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-84	84	0.66	62.40	0.00	0.00	-1.51	0.00	0.00	0.00	60.89

Segment Leq : 60.89 dBA

Total Leq All Segments: 60.89 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 68.48
(NIGHT): 60.89
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 20-07-2022 14:28:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec21.te Time Period: Day/Night 16/8 hours
Description: Receptor Point 2-1

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

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
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: Carp Rd (day/night)

Angle1 Angle2 : 0.00 deg 83.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Carp Rd (day)

Source height = 1.50 m

ROAD (0.00 + 65.46 + 0.00) = 65.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	83	0.66	70.00	0.00	0.00	-4.54	0.00	0.00	0.00	65.46

Segment Leq : 65.46 dBA

Total Leq All Segments: 65.46 dBA

↟
Results segment # 1: Carp Rd (night)

Source height = 1.50 m

ROAD (0.00 + 57.86 + 0.00) = 57.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	83	0.66	62.40	0.00	0.00	-4.54	0.00	0.00	0.00	57.86

Segment Leq : 57.86 dBA

Total Leq All Segments: 57.86 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 65.46
(NIGHT): 57.86
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 20-07-2022 14:30:37
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec31.te Time Period: Day/Night 16/8 hours
Description: Receptor Point 3-1

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

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
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: Carp Rd (day/night)

Angle1 Angle2 : -82.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Carp Rd (day)

Source height = 1.50 m

ROAD (0.00 + 65.44 + 0.00) = 65.44 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-82	0	0.66	70.00	0.00	0.00	-4.56	0.00	0.00	0.00	65.44

Segment Leq : 65.44 dBA

Total Leq All Segments: 65.44 dBA

↟
Results segment # 1: Carp Rd (night)

Source height = 1.50 m

ROAD (0.00 + 57.84 + 0.00) = 57.84 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-82	0	0.66	62.40	0.00	0.00	-4.56	0.00	0.00	0.00	57.84

Segment Leq : 57.84 dBA

Total Leq All Segments: 57.84 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 65.44
(NIGHT): 57.84
↟
↟