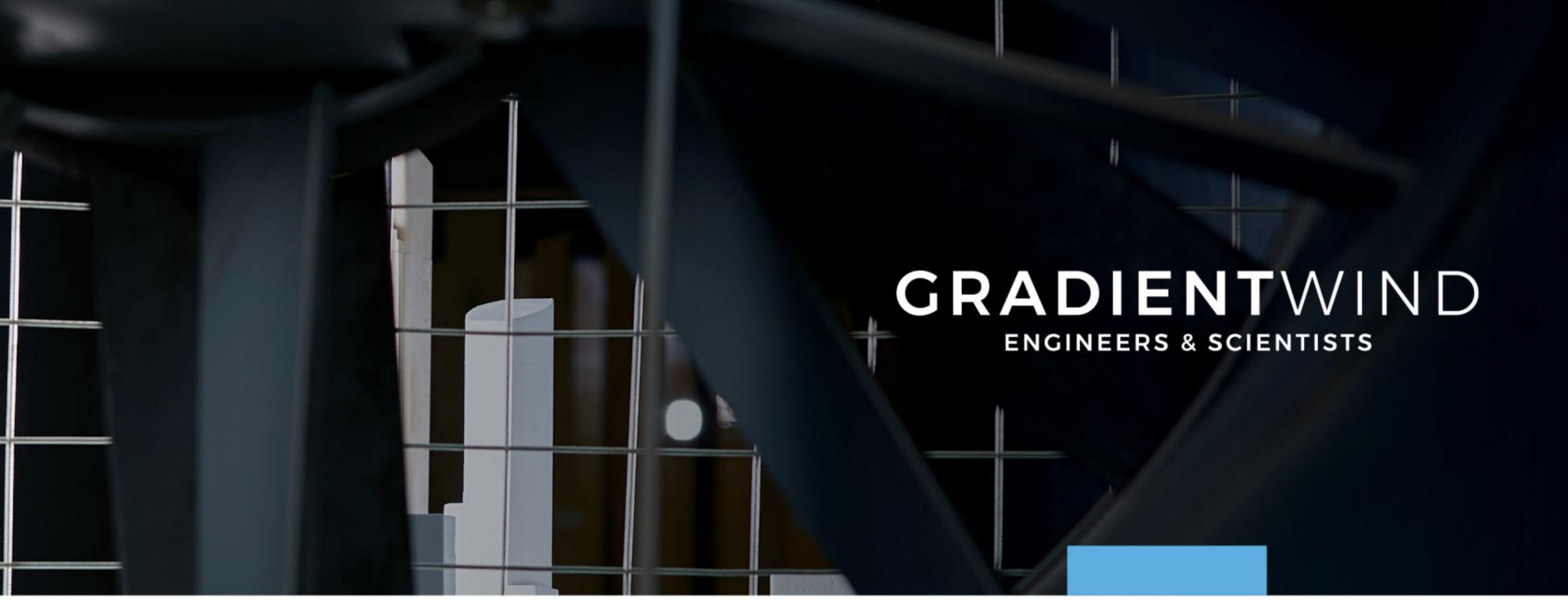
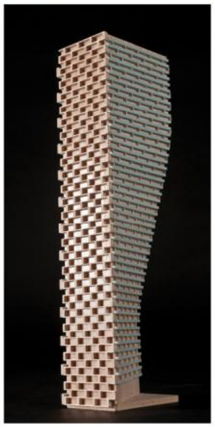
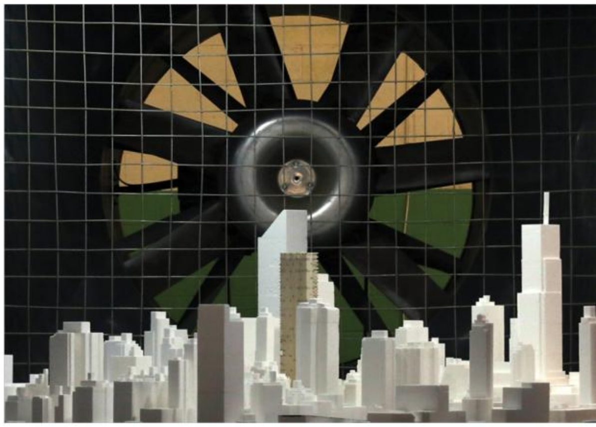


ENVIRONMENTAL NOISE ASSESSMENT

Trailsedge Block 139 & 140
298 Axis Way
Ottawa, Ontario

Report: 24-197 – Traffic Noise Study





June 19, 2026

PREPARED FOR
Minto Communities Inc.
200-180 Kent Street
Ottawa, ON K1P 0B6

PREPARED BY
Sergio Nunez Andres, B.Eng, Junior Environmental Scientist
Joshua Foster, P.Eng., Lead Engineer

EXECUTIVE SUMMARY

This report describes a Traffic noise study undertaken for a proposed subdivision development, located at 298 Axis Way in Ottawa, Ontario. The proposed subdivision is located on an irregular-shaped parcel to the south of the future bus rapid transit corridor (Cumberland Transitway) and Brian Coburn Boulevard. The proposed site is bounded by Brian Coburn Boulevard to the north, Fern Cassey Street to the east, and low-rise buildings to the east, south, and west. Axis Way and Compass Street are located farther to the south and west, respectively. The site plan and surrounding context is illustrated in Figure 1.

The major sources of traffic noise impacting the residential subdivision are the Cumberland Transitway and Brian Coburn Boulevard. Also, a major collector road, Fern Casey Boulevard, and local roads, Axis Way and Compass Street, are considered to have a noise impact on the development area. Receptor locations are identified in Figure 2.

The assessment is based on (i) theoretical noise prediction methods that conform to the Ministry of the Environment, Conservation and Parks (MECP) and City of Ottawa requirements; (ii) noise level criteria as specified by the City of Ottawa's Environmental Noise Control Guidelines (ENCG); (iii) future vehicular traffic volumes based on the City of Ottawa's Official Plan roadway classifications; and (iv) a grading plan and survey drawings prepared by SRN Architects.

The results of the roadway traffic noise calculations are summarized in Table 3. The results of the current analysis indicate that noise levels will range between 48 and 71 dBA during the daytime period (07:00-23:00) and between 40 and 62 dBA during the nighttime period (23:00-07:00). The highest noise level (71 dBA) occurs at the north of the development, which is directly exposed to the noise generated by Brian Coburn Boulevard and the Cumberland Transitway.

Upgraded building components will be required for Blocks 4, 5, and 6, where predicted daytime traffic noise levels exceed 65 dBA, as summarized in Table 5 and illustrated in Figure 3. For these blocks, windows with a minimum STC rating of 35 will be required for both bedrooms and living rooms, together with central air conditioning.

Forced-air heating systems with provisions for central air conditioning will be required for Blocks 1, 2, 3, 7, 8, 9, 12, 13, and 14. Type C warning clauses will be required in all Lease, Purchase, and Sale Agreements associated with these blocks. Type D warning clauses will be required in all Lease, Purchase, and Sale Agreements associated with Blocks 4, 5, and 6. No ventilation requirements or warning clauses are required for Blocks 10, 11, and 15. Figure 3 illustrates the applicable warning clause requirements.

There are no outdoor living areas (OLA) associated with this development. Balconies of less than 4 metres in depth are not considered as a point of assessment for a noise study. The landscaped area located to the north of Block 12 labelled as an amenity area is not an OLA because it is not immediately accessible from the buildings and will function more as a parkette which is not considered OLA as per the ENCG.

No major pieces of mechanical equipment are expected to be associated with the development, thus impacts of stationary noise sources on the surroundings and the development itself will be negligible.

TABLE OF CONTENTS

1. INTRODUCTION

Gradient Wind Engineering Inc. (Gradient Wind) was retained by Minto Communities Inc. to undertake an Traffic Noise Study for a proposed subdivision development, located at 298 Axis Way in Ottawa, Ontario. This report summarizes the methodology, results, and recommendations related to the assessment of exterior and interior noise levels generated by local roadway traffic.

Our work is based on theoretical noise calculation methods conforming to the City of Ottawa[1] and Ministry of the Environment, Conservation and Parks (MECP)[2] guidelines. Noise calculations were based on a grading plan and survey drawings prepared by SRN Architects, with future traffic volumes corresponding to the City of Ottawa's Official Plan (OP) roadway classifications.

2. TERMS OF REFERENCE

The proposed subdivision is situated on an irregular-shaped parcel to the south of the future bus rapid transit corridor (Cumberland Transitway) and Brian Coburn Boulevard. The proposed site is bounded by Brian Coburn Boulevard to the north, Fern Cassey Street to the east, and low-rise buildings to the east, south, and west. Axis Way and Compass Street are located farther to the south and west, respectively.

There are no outdoor living areas (OLA) associated with this development. Balconies of less than 4 metres (m) in depth are not considered as point of assessment for a noise study. The landscaped area located to the north of block 12 labelled as an amenity area is not an OLA because it is not immediately accessible from the buildings and will function more as a parkette which is not considered OLA as per the ENCG.

Gradient Wind considered all roadway traffic noise sources with the potential to influence the subject site. The primary sources of roadway traffic noise affecting the proposed residential development are the Cumberland Transitway and Brian Coburn Boulevard. In addition, Fern Casey Boulevard, a major collector roadway, as well as the local roads Axis Way and Compass Street were included in the noise assessment.

[1] City of Ottawa Environmental Noise Control Guidelines, January 2016
[2] Ontario Ministry of the Environment, Conservation and Parks – Environmental Noise Guidelines, Publication NPC-300, Queens Printer for Ontario, Toronto, 2013

3. OBJECTIVES

The principal objectives of this study are to (i) calculate the future noise levels on the study buildings produced by local transportation sources, and (ii) ensure that interior and exterior noise levels do not exceed the allowable limits specified by the City of Ottawa's Environmental Noise Control Guidelines (ENCG) and the Ministry of Environment, Conservation and Parks (MECP) NPC-300 guidelines as outlined in Section 4 of this report.

4. METHODOLOGY

4.1 Background

Noise can be defined as any obtrusive sound. It is created at a source, transmitted through a medium, such as air, and intercepted by a receiver. Noise may be characterized in terms of the power of the source or the sound pressure at a specific distance. While the power of a source is characteristic of that particular source, the sound pressure depends on the location of the receiver and the path that the noise takes to reach the receiver. Measurement of noise is based on the decibel unit, dBA, which is a logarithmic ratio referenced to a standard noise level (2×10^{-5} Pascals). The 'A' suffix refers to a weighting scale, which better represents how the noise is perceived by the human ear. With this scale, a doubling of power results in a 3 dBA increase in measured noise levels and is just perceptible to most people. An increase of 10 dBA is often perceived to be twice as loud.

4.2 Roadway Traffic Noise

4.2.1 Criteria for Roadway Traffic Noise

For vehicular traffic, the equivalent sound energy level, L_{eq}, provides a measure of the time-varying noise levels, which is well correlated with the annoyance of sound. It is defined as the continuous sound level, which has the same energy as a time-varying noise level over a period of time. For roadways, the L_{eq} is commonly calculated on the basis of a 16-hour (L_{eq16}) daytime (07:00-23:00) / 8-hour (L_{eq8}) nighttime (23:00-07:00) split to assess its impact on residential buildings. The ENCG and NPC-300 guidelines specify the recommended indoor noise limits, as listed in Table 1.

TABLE 1: INDOOR SOUND LEVEL CRITERIA

Type of Space	Time Period	Road L_{eq} (dBA)
General offices, reception areas, **retail** stores, etc.	07:00 – 23:00	50
Living/dining/den areas of residences, hospitals, schools, nursing/retirement homes, day-care centres, theatres, places of worship, libraries, individual or semi-private offices, conference rooms, etc.	07:00 – 23:00	45
Sleeping quarters of hotels/motels	23:00 – 07:00	45
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	07:00 – 23:00	45
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	23:00 – 07:00	40

Predicted noise levels at the plane of window (POW) dictate the action required to achieve the recommended sound levels. An open window is considered to provide a 10 dBA reduction in noise, while a standard closed window is capable of providing a minimum 20 dBA noise reduction[3]. A closed window due to a ventilation requirement will bring noise levels down to achieve an acceptable indoor environment[4]. Therefore, where noise levels exceed 55 dBA daytime and 50 dBA nighttime, the ventilation for the building should consider the need for having windows and doors closed, which normally triggers the need for central air conditioning. Where noise levels exceed 65 dBA daytime and 60 dBA nighttime, building components will require higher levels of sound attenuation[5].

The sound level criterion for OLAs is 55 dBA, which applies during the daytime (07:00 to 23:00). When noise levels exceed 55 dBA but are less than 60 dBA, mitigation should be provided to reduce noise levels where technically and administratively feasible to acceptable levels at or below the criterion. Where noise levels exceed 60 dBA noise mitigation is required to reduce noise levels as technically and administratively

[3] Burberry, P.B. (2014). Mitchell's Environment and Services. Routledge, Page 125
[4] MECP, Environmental Noise Guidelines, NPC 300 – Part C, Section 7.8
[5] MECP, Environmental Noise Guidelines, NPC 300 – Part C, Section 7.1.3

feasible. If these measures are not provided or feasible prospective purchasers or tenants should be informed of potential noise concerns by a warning clause.

4.2.2 Theoretical Roadway Noise Predictions

The impact of transportation noise sources on the development was determined by computer modelling. Transportation noise source modelling is based on the software program *CadnaA,* which utilizes the United States Federal Highway Administration's Traffic Noise Model (TNM) to represent the roadway line sources. The TNM model has been accepted in the updated Environmental Guide for Noise of Ontario, 2022 by the Ministry of Transportation (MTO)[6]. The Ministry of Environment, Conservation and Parks has also adopted the TMN model as per their "Draft Guideline Noise Pollution Control Publications 306 (NPC-306)[7]. The *CadnaA* computer program can represent three-dimensional surfaces and the first reflection of sound waves over a suitable spectrum for human hearing. A total of eighteen (18) receptor locations were identified around the site, as illustrated in Figure 2.

A set of comparative calculations was performed in the previous Ontario traffic noise prediction model, STAMSON, for comparisons to the CadnaA simulation results. The STAMSON model is, however, older and requires each receptor to be calculated separately. STAMSON also does not accurately account for building reflections and multiple screening elements, and curved road geometry. A total of one (1) receptor location was used for comparison. The STAMSON and CadnaA results comparison can be seen in Table 4.

Therefore, the results were confirmed by performing discrete noise calculations with the MECP computerized noise assessment program, STAMSON 5.04, at one sample receptor location coinciding with the receptor locations in CadnaA as shown in Figure 2.

Roadway noise calculations were performed by treating each road segment as a separate line source of noise. In addition to the traffic volumes summarized in Table 2, theoretical noise predictions were based on the following parameters:

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[6] Ministry of Transportation Ontario, "*Environmental Guide for Noise*", February 2022
[7] Ministry of Environment, Conservation and Parks, Ontario, "Methods to determine Sound Levels Due to Road and Rail Traffic", Draft February 12, 2020

- Truck traffic on all roadways was taken to comprise 5% heavy trucks and 7% medium trucks, as per ENCG requirements for noise level predictions.
- The day/night split was taken to be 92% / 8% respectively for all streets.
- Ground surfaces were conservatively modelled as hard ground (i.e. pavement, concrete).
- The study site was treated as having flat or gently sloping topography.
- The study site buildings are considered potential noise screening elements.
- Eighteen (18) receptors were strategically placed throughout the study area.

4.2.3 Roadway Traffic Volumes

The ENCG dictates that noise calculations should consider future sound levels based on a roadway's classification at the mature state of development. Therefore, traffic volumes are based on the roadway classifications outlined in the City of Ottawa's Official Plan (OP) and Transportation Master Plan[8] which provide additional details on future roadway expansions. Average Annual Daily Traffic (AADT) volumes are then based on data in Table B1 of the ENCG for each roadway classification. Traffic volumes for the proposed Cumberland Transitway are based on Gradient Wind's experience with other developments in the area. Table 2 (below) summarizes the AADT values used for each roadway included in this assessment.

[8] City of Ottawa Transportation Master Plan, February 2024 Update

TABLE 2: ROADWAY TRAFFIC DATA

Segment	Roadway Traffic Data	Speed Limit (km/h)	Traffic Volumes
Brian Coburn Boulevard	4-Lane Urban Arterial Undivided (4-UAU)	70	**30,000**
Fern Casey Boulevard	2-Lane Major Collector (2-UMCU)	60	**12,000**
Axis Way	Local Road	50	**8,000**
Compass street	Local Road	50	**8,000**
Cumberland Transitway	Bus Rapid Transit	60	**488/42***

*Day / Night Volumes based on the Biran Coburn Expansion and Cumberland Transitway Environmental Assessment

4.3 Indoor Noise Control Measures

The difference between outdoor and indoor noise levels is the noise attenuation provided by the building envelope. According to common industry practice, complete walls and individual wall elements are rated according to the Sound Transmission Class (STC). The STC ratings of common residential walls built in conformance with the Ontario Building Code (2020) typically exceed STC 35, depending on exterior cladding, thickness and interior finish details. For example, brick veneer walls can achieve STC 50 or more. Standard commercially sided exterior metal stud walls have around STC 40. Standard good quality double-glazed non-operable windows can have STC ratings ranging from 25 to 40, depending on the window manufacturer, pane thickness and inter-pane spacing. As previously mentioned, the windows are the known weak point in a partition.

As per Section 4.2, when daytime noise levels (from road) at the plane of the window exceed 65 dBA for road, calculations must be performed to evaluate the sound transmission quality of the building components to ensure acceptable indoor noise levels. The calculation procedure[9] considers:

[9] Building Practice Note: Controlling Sound Transmission into Buildings by J.D. Quirt, National Research Council of Canada, September 1985

- Window type and total area as a percentage of total room floor area
- Exterior wall type and total area as a percentage of the total room floor area
- Acoustic absorption characteristics of the room
- Outdoor noise source type and approach geometry
- Indoor sound level criteria, which vary according to the intended use of a space

Based on published research[10], exterior walls possess specific sound attenuation characteristics that are used as a basis for calculating the required STC ratings of windows in the same partition. Due to the limited information available at the time of the study, which was prepared for site plan approval, detailed floor layouts and building elevations have not been finalized; therefore, detailed STC calculations could not be performed at this time. As a guideline, the anticipated STC requirements for windows have been estimated based on the overall noise reduction required for each intended use of space (STC = outdoor noise level – targeted indoor noise levels + Safety Factor).

5. RESULTS

5.1 Roadway Traffic Noise Levels

The results of the roadway traffic noise calculations are summarized in Table 3 below. The results of the current analysis indicate that noise levels will range between 48 and 71 dBA during the daytime period (07:00-23:00) and between 40 and 62 dBA during the nighttime period (23:00-07:00). The highest noise level (71 dBA) occurs at the north of the development, which is directly exposed to the noise generated by Brian Coburn Boulevard and the Cumberland Transitway. Figures 4 and 5 illustrate daytime and nighttime noise contours, respectively, throughout the site at a height of 4.5 m above grade.

Based on the results, mitigation measures such as upgraded building components and noise barriers as well as warning clauses in all Lease, Purchase, and Sale Agreements will be required.

[10] CMHC, Road & Rail Noise: Effects on Housing

TABLE 3: EXTERIOR NOISE LEVELS DUE TO ROADWAY TRAFFIC SOURCES

Receptor ID	Receptor Location	Receptor Height (m)	CadnaA Noise Level (dBA)	
			Day	Night
R1	POW – Block 06 North Façade	1.5	71	62
		4.5	70	62
R2	POW – Block 05 North Façade	1.5	71	62
		4.5	70	62
R3	POW – Block 04 North Façade	1.5	71	62
		4.5	70	62
R4	POW – Block 08 West Façade	1.5	64	55
		4.5	63	55
R5	POW – Block 07 West Façade	1.5	63	54
		4.5	62	54
R6	POW – Block 08 North Façade	1.5	63	54
		4.5	62	53
R7	POW – Block 12 North Façade	1.5	58	49
		4.5	57	48
R8	POW – Block 13 North Façade	1.5	61	52
		4.5	60	51
R9	POW – Block 03 East Façade	1.5	64	56
		4.5	63	55
R10	POW – Block 02 East Façade	1.5	61	54
		4.5	61	53
R11	POW – Block 01 East Façade	1.5	61	54
		4.5	61	53
R12	POW – Block 15 South Façade	1.5	48	40
		4.5	50	41

TABLE 3: EXTERIOR NOISE LEVELS DUE TO ROADWAY TRAFFIC SOURCES (CONTINUED)

Receptor ID	Receptor Location	Receptor Height (m)	CadnaA Noise Level (dBA)	
			Day	Night
R13	POW – Block 11 South Façade	1.5	51	43
		4.5	52	43
R14	POW – Block 10 West Façade	1.5	51	42
		4.5	51	42
R15	POW – Block 09 North Façade	1.5	61	53
		4.5	61	52
R16	POW – Block 09 West Façade	1.5	59	50
		4.5	58	49
R17	POW – Block 14 West Façade	1.5	54	45
		4.5	54	45
R18	POW – Block 02 North Façade	1.5	58	50
		4.5	58	50

Table 4 below provides a comparison between CadnaA and STAMSON. Noise levels calculated in STAMSON were found to have a good correlation with CadnaA and the variability between the two programs was within an acceptable level of ±0-2 dBA.

TABLE 4: RESULT CORRELATION WITH STAMSON

Receptor Number	Receptor Location	Receptor Height (m)	CadnaA Noise Level (dBA)		STAMSON 5.04 Noise Level (dBA)	
			Day	Night	Day	Night
R1	POW – Block 06 North Façade	1.5	71	62	72	64

6. NOISE MITIGATION STUDY

6.1 Upgraded Building Components

The noise levels predicted due to roadway traffic exceed the criteria listed in Section 4.2 for building components. As discussed in Section 4.3, the anticipated STC requirements for windows have been estimated based on the overall noise reduction required for each intended use of space (STC = outdoor noise level – targeted indoor noise levels + Safety Factor). Detailed STC calculations will be required to be completed prior to the building permit application for each unit type. The STC requirements for the windows as well as ventilation requirements and warning clauses are summarized below in Table 5 for various units within the development (see also Figure 3). Façades not listed do not require upgrades building components:

TABLE 5: STC & VENTILATION REQUIREMENTS

Building Name	Façade	Windows STC Requirements		Ventilation Requirement	Warning Clause
		Bedroom	Living Room		
Blocks 4, 5, 6	North Façade East Façade South Façade West Façade	35	35	Central Air Conditioning	Type D
Blocks 1, 2, 3, 7, 8, 9, 12, 13, 14	North Façade East Façade South Façade West Façade	OBC Compliant	OBC Compliant	Forced Air Heating with Provision for Central Air Conditioning	Type C
Blocks 10, 11, 15	North Façade East Façade South Façade West Façade	OBC Compliant	OBC Compliant	N/A	N/A

Exterior Walls

(i) Exterior wall components on the façades, which require STC-rated windows, will require a minimum STC of 40, which can be achieved with brick cladding or an acoustical equivalent according to NRC test data[11].

Exterior wall components on these façades are recommended to have a minimum STC of 40, where a window/wall system is used. A review of window supplier literature indicates that the specified STC ratings can be achieved by a variety of window systems having a combination of glass thickness and inter-pane spacing. It is the responsibility of the manufacturer to ensure that the specified window achieves the required STC. This can only be assured by using window configurations that have been certified by laboratory testing. The requirements for STC ratings assume that the remaining components of the building are constructed and installed according to the minimum standards of the Ontario Building Code. The specified STC requirements also apply to swinging and/or sliding patio doors.

Results of the calculations also indicate that the development will require central air conditioning or a similar mechanical system, which will allow occupants to keep windows closed and maintain a comfortable living environment in the blocks and lots noted in Table 5. In addition to ventilation requirements, Warning Clauses will also be required in all Lease, Purchase, and Sale Agreements, as summarized in Section 7.

[11] J.S. Bradley and J.A. Birta. Laboratory Measurements of the Sound Insulation of Building Façade Elements, National Research Council October 2000.

7. CONCLUSIONS AND RECOMMENDATIONS

The results of the roadway traffic noise calculations are summarized in Table 3. The results of the current analysis indicate that noise levels will range between 48 and 71 dBA during the daytime period (07:00-23:00) and between 40 and 62 dBA during the nighttime period (23:00-07:00). The highest noise level (71 dBA) occurs at the north of the development, which is directly exposed to the noise generated by Brian Coburn Boulevard and the Cumberland Transitway. Figures 4 and 5 illustrate daytime and nighttime noise contours, respectively, throughout the site at a height of 4.5 m above grade.

Upgraded building components will be required where noise levels exceed 65 dBA as illustrated in Figure 3. Building components compliant with the Ontario Building Code (OBC 2020) will be sufficient for the remaining façades of the buildings. In addition, Type C and D warning clauses will be required in all Lease, Purchase, and Sale Agreements, as summarized below:

For Blocks 1, 2, 3, 7, 8, 9, 12, 13, 14:

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."*

For Blocks 4,5,6:

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."*

The landscaped area located to the north of Block 12 labelled as an amenity area is not an OLA because it is not immediately accessible from the buildings and will function more as a parkette which is not considered OLA as per the ENCG.

No major pieces of mechanical equipment are expected to be associated with the development, thus impacts of stationary noise sources on the surroundings and the development itself will be negligible.

This concludes our environmental noise study and report. If you have any questions or wish to discuss our findings, please advise us. In the interim, we thank you for the opportunity to be of service.

Sincerely,

Gradient Wind Engineering Inc.

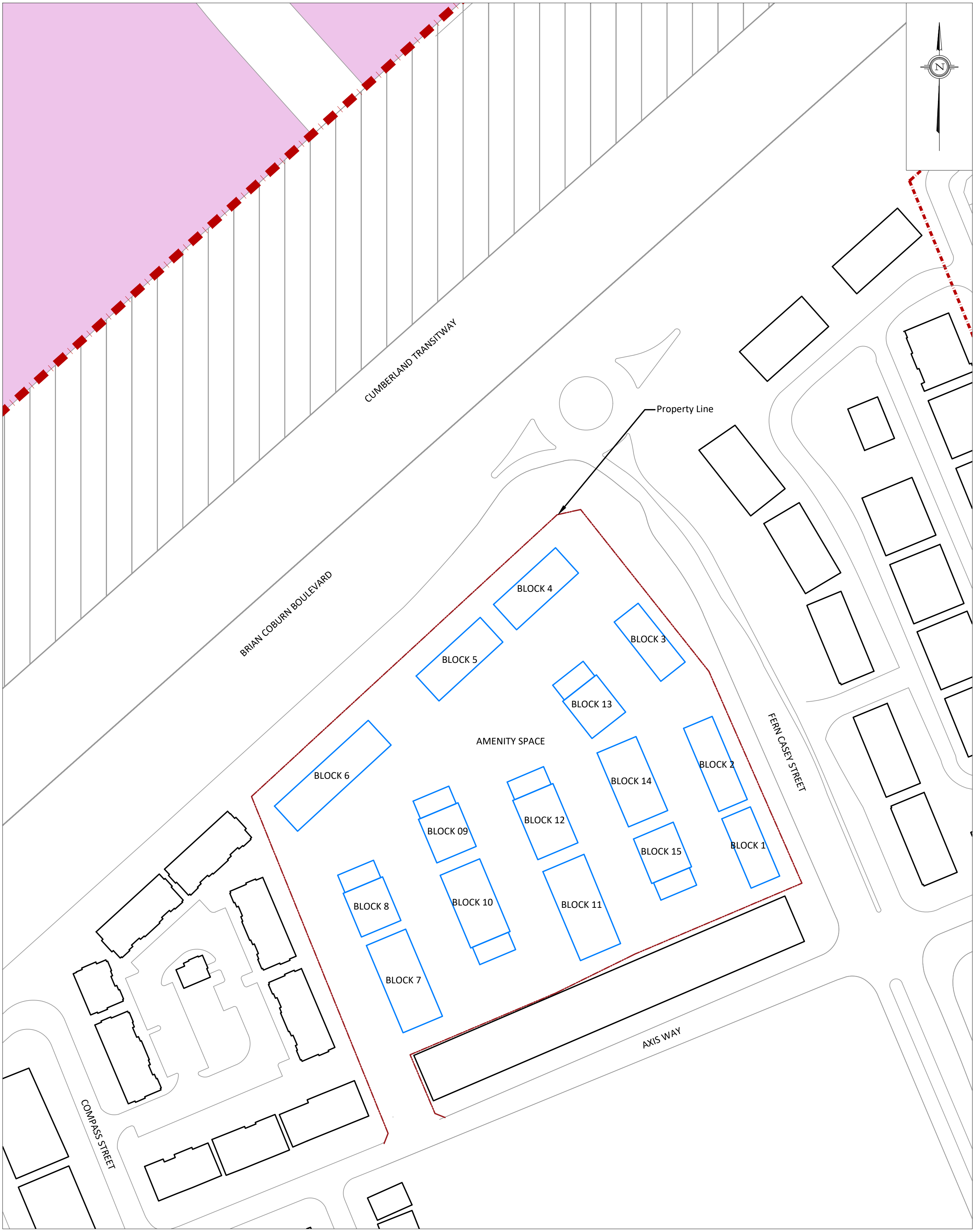
LICENSED PROFESSIONAL ENGINEER
J. R. FOSTER
100155655
2026-06-19
PROVINCE OF ONTARIO

Sergio Nunez Andres

Sergio Nunez Andres, B.Eng.
Junior Acoustic Scientist

Joshua Foster, P.Eng.
Lead Engineer

Gradient Wind File #24-197 – Traffic Noise Study

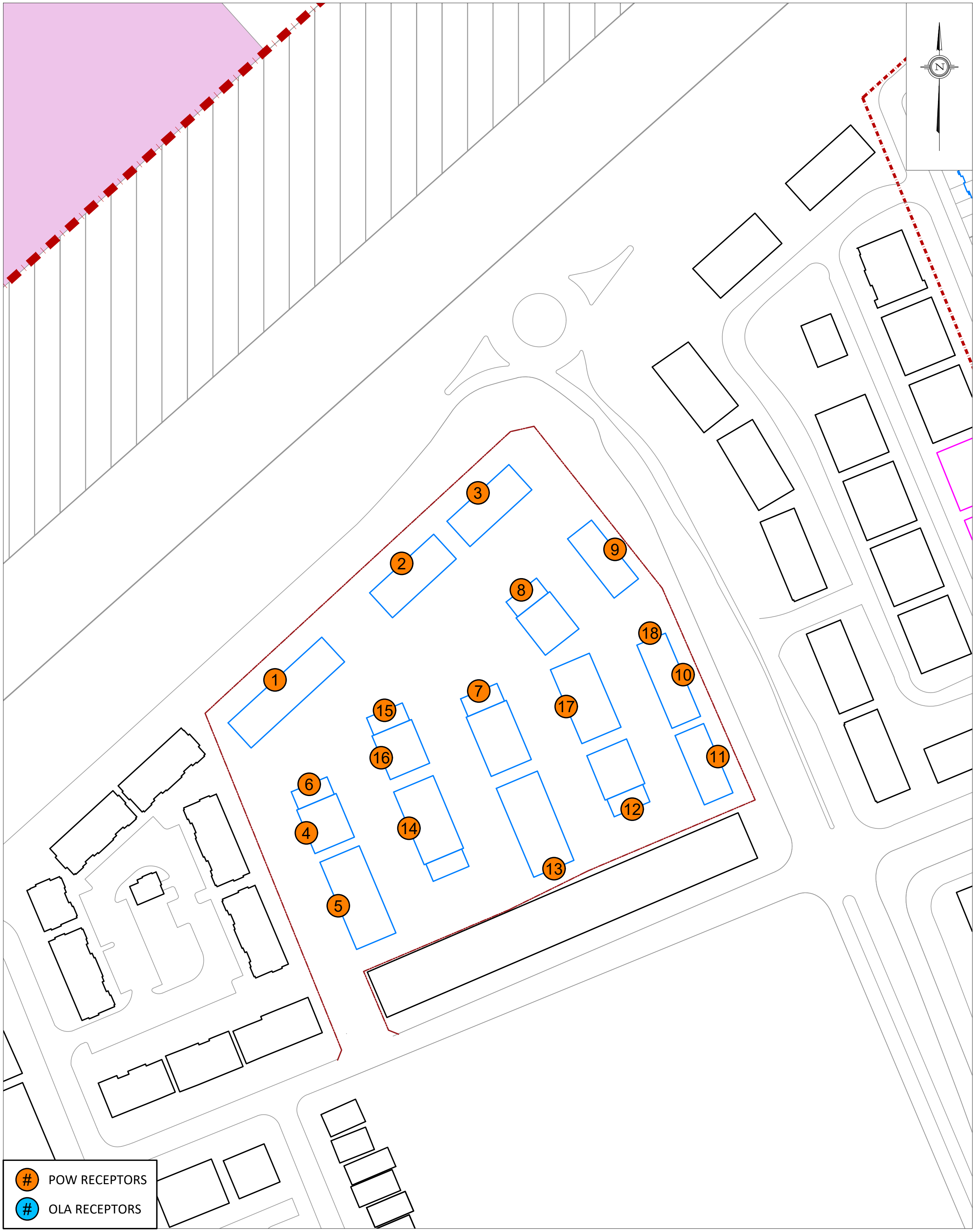


GRADIENTWIND
ENGINEERS & SCIENTISTS
127 WALGREEN ROAD, OTTAWA, ON
613 836 0934 • GRADIENTWIND.COM

PROJECT	298 AXIS WAY, OTTAWA TRAFFIC NOISE STUDY		
SCALE	1:2000 (APPROX.)	DRAWING NO.	24-197-ANV-1
DATE	JUNE 19, 2026	DRAWN BY	S.N

DESCRIPTION

FIGURE 1:
SITE PLAN AND SURROUNDING CONTEXT



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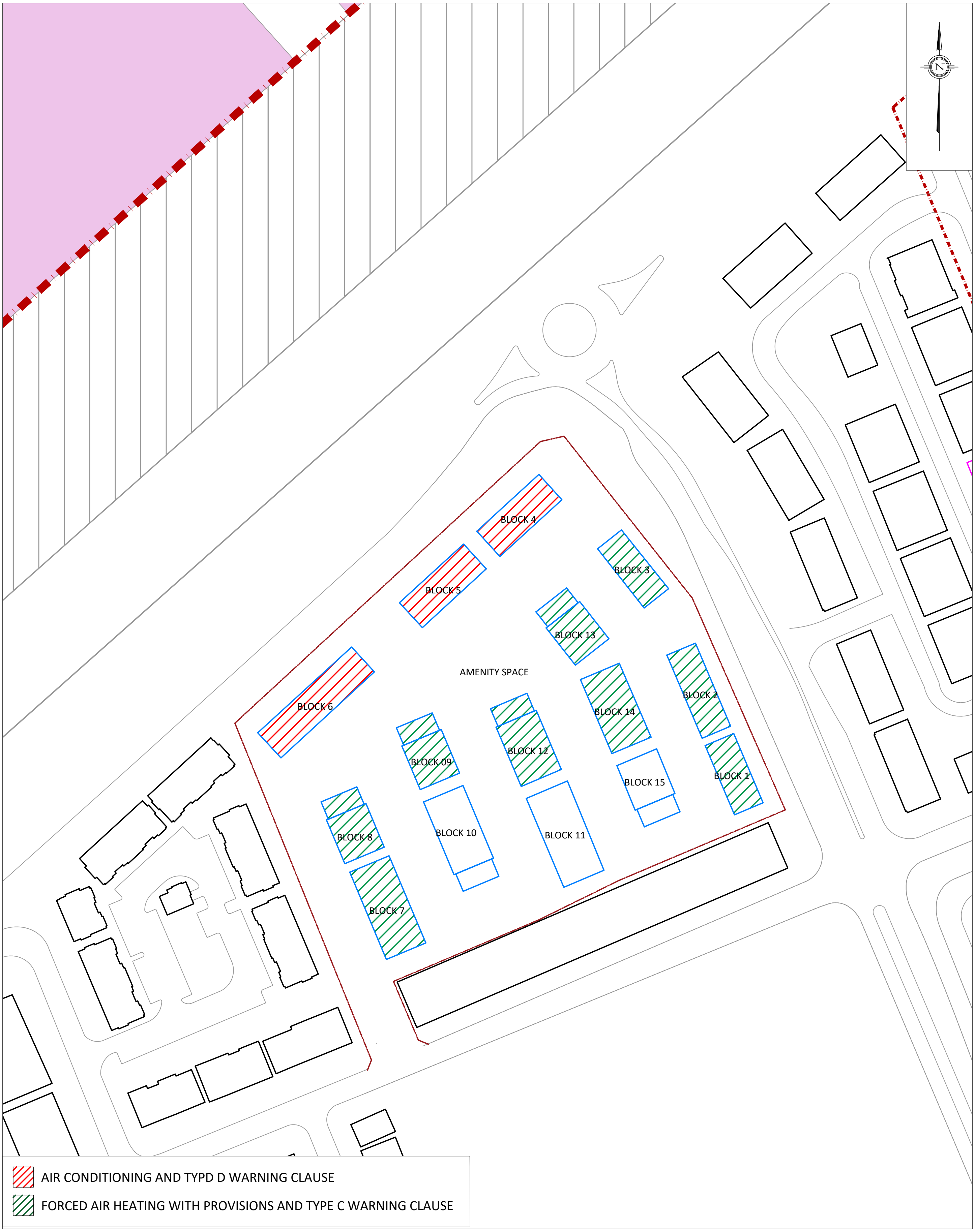
SCALE	1:2000 (APPROX.)	DRAWING NO.	24-197-ANV-2
DATE	JUNE 19, 2026	DRAWN BY	S.N

DESCRIPTION

FIGURE 2:
RECEPTOR LOCATIONS



GRADIENTWIND ENGINEERS & SCIENTISTS 127 WALGREEN ROAD, OTTAWA, ON 613 836 0934 • GRADIENTWIND.COM	PROJECT: 298 AXIS WAY, OTTAWA TRAFFIC NOISE STUDY		DESCRIPTION: FIGURE 3: STC REQUIREMENTS
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	DATE: JUNE 19, 2026	DRAWN BY: S.N	

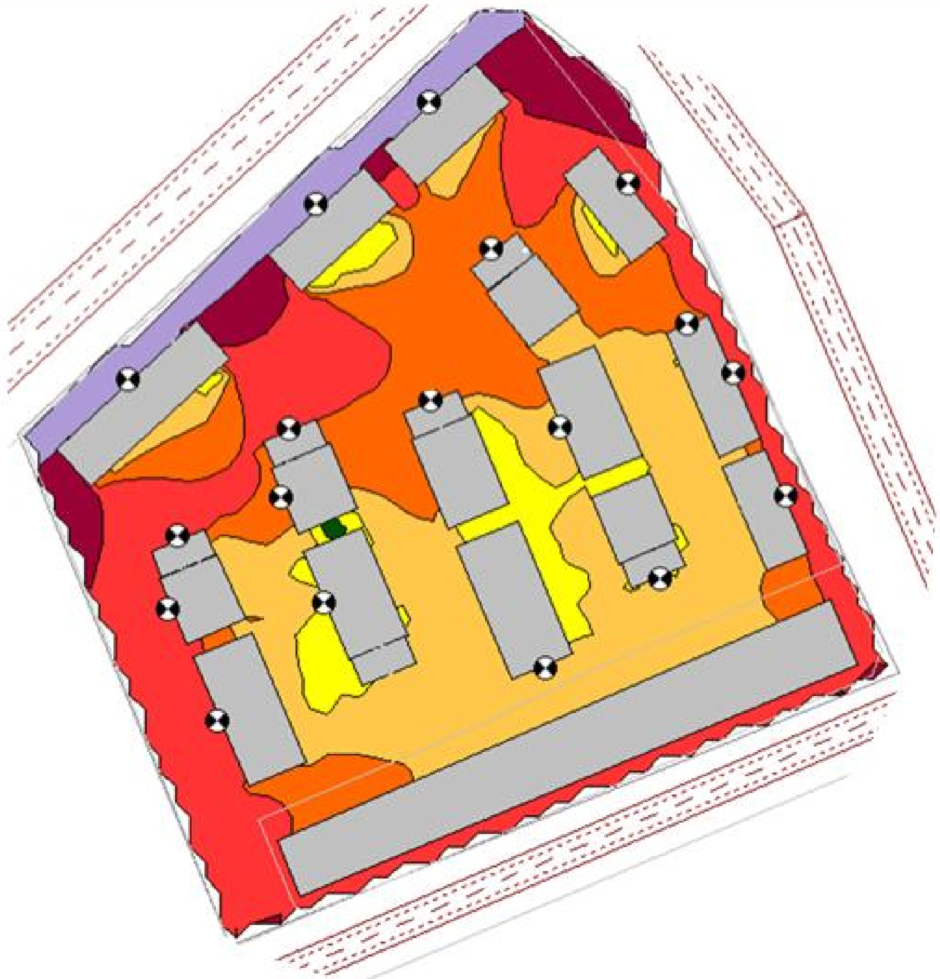


FIGURE 4: DAYTIME TRAFFIC NOISE CONTOURS
(4.5 M ABOVE GRADE)

80 – 85 dB
75 – 80 dB
70 – 75 dB
65 – 70 dB
60 – 65 dB
55 – 60 dB
50 – 55 dB
45 – 50 dB
40 – 45 dB
35 – 40 dB
0 – 35 dB

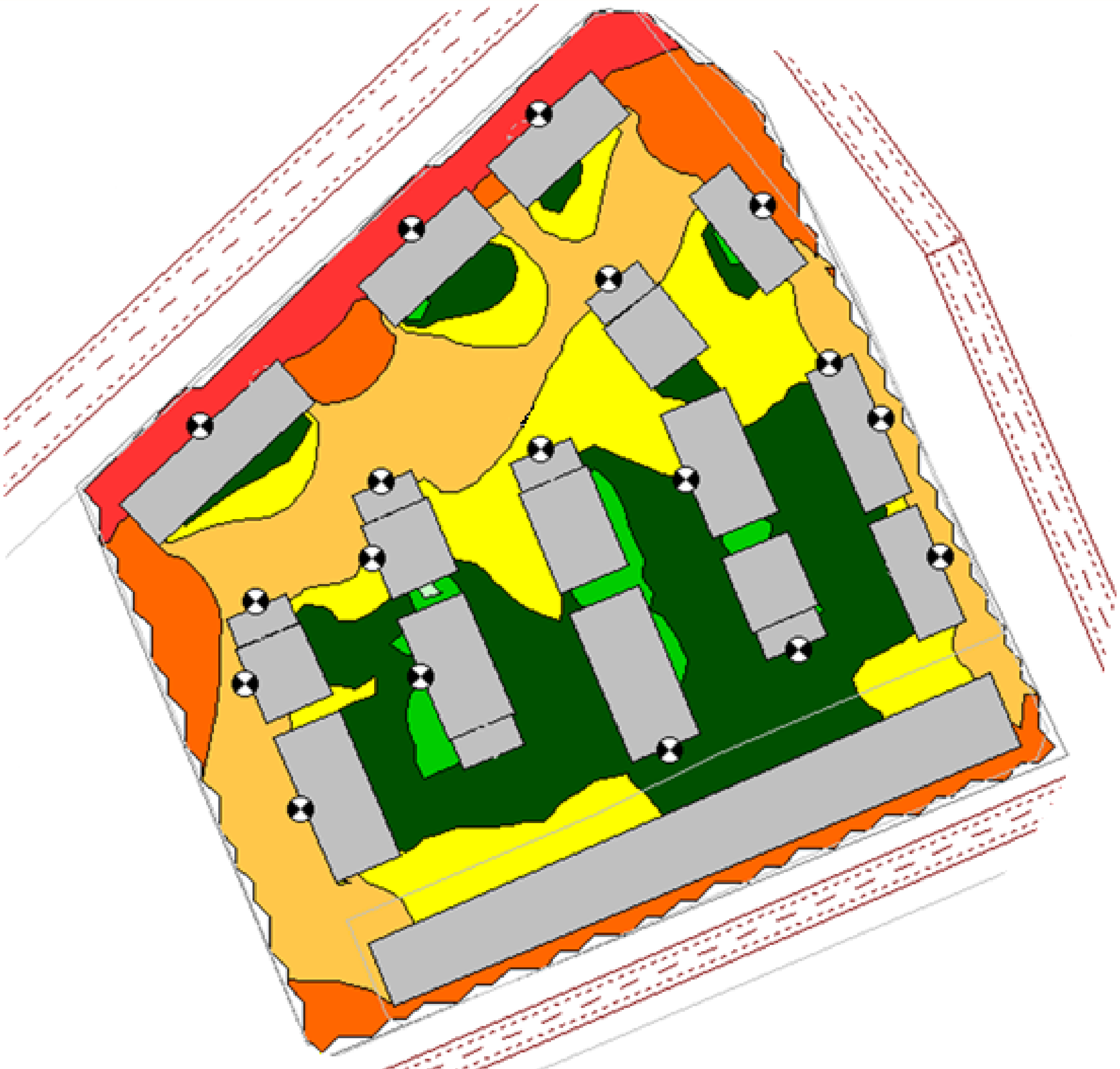
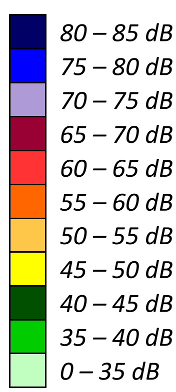
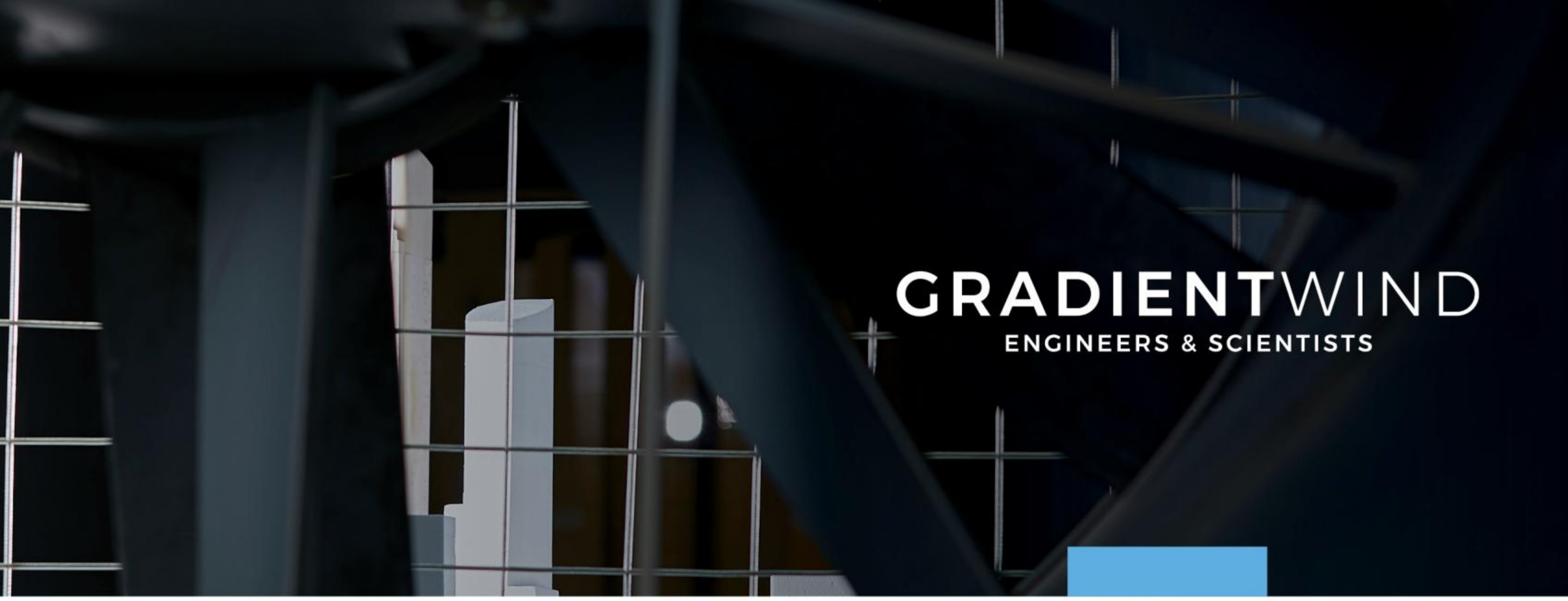
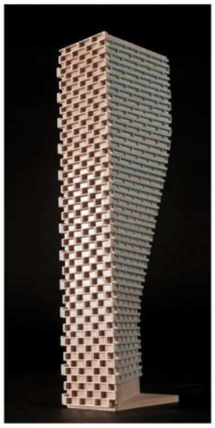
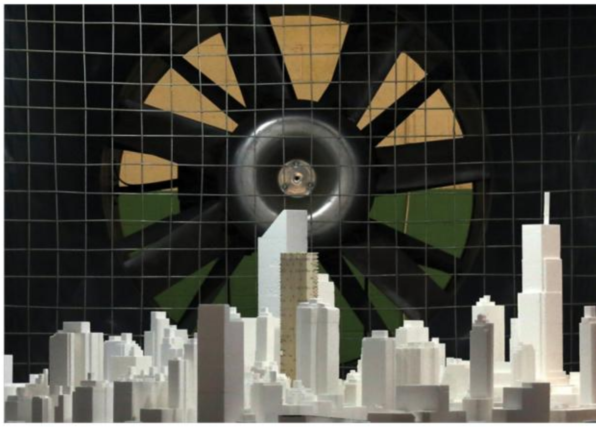


FIGURE 5: NIGHTTIME TRAFFIC NOISE CONTOURS
(4.5 M ABOVE GRADE)









APPENDIX A

STAMSON INPUT-OUTPUT DATA

127 WALGREEN ROAD, OTTAWA, ON, CANADA K0A 1L0 | 613 836 0934
GRADIENTWIND.COM

```
STAMSON 5.0        COMPREHENSIVE REPORT        Date: 19-06-2026 10:20:16
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R1TOT.te             Time Period: Day/Night 16/8 hours
Description:


Road data, segment # 1: Brian Blv (day/night)
---------------------------------------------
Car traffic volume  : 24288/2112  veh/TimePeriod  *
Medium truck volume :  1932/168   veh/TimePeriod  *
Heavy truck volume  :  1380/120   veh/TimePeriod  *
Posted speed limit  :    70 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):  30000
    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: Brian Blv (day/night)
-------------------------------------------
Angle1   Angle2            : -90.00 deg   90.00 deg
Wood depth                 :      0       (No woods.)
No of house rows           :      0 / 0
Surface                    :      2       (Reflective ground surface)
Receiver source distance   :  25.00 / 25.00  m
Receiver height            :   1.50 / 1.50   m
Topography                 :      1       (Flat/gentle slope; no barrier)
Reference angle            :   0.00
```

```
Segment # 1: Brian Blv (day)
----------------------------

Source height = 1.50 m

ROAD (0.00 + 72.11 + 0.00) = 72.11 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
--------------------------------------------------------------------------
--
   -90     90   0.00  74.33   0.00  -2.22   0.00   0.00   0.00   0.00
72.11
--------------------------------------------------------------------------
--

Segment Leq : 72.11 dBA

Total Leq All Segments: 72.11 dBA


Segment # 1: Brian Blv (night)
------------------------------

Source height = 1.50 m

ROAD (0.00 + 64.51 + 0.00) = 64.51 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
--------------------------------------------------------------------------
--
   -90     90   0.00  66.73   0.00  -2.22   0.00   0.00   0.00   0.00
64.51
--------------------------------------------------------------------------
--

Segment Leq : 64.51 dBA

Total Leq All Segments: 64.51 dBA
```

```
RT/Custom data, segment # 1: TRANSITWAY (day/night)
---------------------------------------------------
1 - Bus:
Traffic volume    :   488/42    veh/TimePeriod
Speed             :    60  km/h

Data for Segment # 1: TRANSITWAY (day/night)
--------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  62.00 / 62.00  m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


Segment # 1: TRANSITWAY (day)
-----------------------------

Source height = 0.50 m

RT/Custom (0.00 + 52.97 + 0.00) = 52.97 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
----------------------------------------------------------------------
   -90     90   0.00  60.50  -7.53   0.00   0.00   0.00   0.00  52.97
----------------------------------------------------------------------

Segment Leq : 52.97 dBA

Total Leq All Segments: 52.97 dBA
```

```
Segment # 1: TRANSITWAY (night)
-------------------------------

Source height = 0.50 m

RT/Custom (0.00 + 45.33 + 0.00) = 45.33 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
----------------------------------------------------------------------
   -90     90   0.00  52.86  -7.53   0.00   0.00   0.00   0.00  45.33
----------------------------------------------------------------------

Segment Leq : 45.33 dBA

Total Leq All Segments: 45.33 dBA




TOTAL Leq FROM ALL SOURCES (DAY): 72.16
                         (NIGHT): 64.56
```