PATERSON GROUP

Environmental Noise Control Study

Proposed Development

8201 Campeau Drive
Ottawa, Ontario

Prepared for Theberge Group

Report PG6934-3 – Dated July 14, 2025

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1.0 Introduction

Paterson Group (Paterson) was commissioned by Theberge Group to conduct an environmental noise control study for the proposed development to be located at 8201 Campeau Drive in the City of Ottawa.

The objectives of the current study are 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 Conservation and Parks (MOECP) 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 residential development as they are understood at the time of writing this report.

This study has been conducted according to the 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 residential development will consist of two six-storey buildings denoted as Building A and Building B. Associated at-grade roadways, parking areas, landscaped areas and outdoor living areas are also anticipated as a part of the proposed development.

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

The City of Ottawa's Official Plan, in addition to the ENCG, dictate that the influence area must contain any of the 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 principal main railway line.

The NPC-300 outlines the limitations of the stationary and environmental noise levels in relation to the location of the receptors. These can be found below in the following tables:

Table 1 - Sound Level Limits for Outdoor Living Areas

Time Period	Required $L_{eq(16)}$ (dBA)
16 hours, 7:00-23:00	55

I. Standards taken from Table 2.2a; Sound Level Limit for Outdoor Living Areas - Road and Rail

Table 2 - Sound Level Limits for Indoor Living Areas

Type of Space	Time Period	Required L_{eq} (dBA)	
		Road	Rail
Living/Dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc	7:00-23:00	45	40
Theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms	23:00-7:00	45	40
Sleeping quarters	7:00-23:00	45	40
	23:00-7:00	40	35

I. Standards taken from Table 2.2b; Sound Level Limit for Indoor Living Areas - Road and Rail

It is noted in ENCG that the limits outlined in Table 2 are for the sound levels on the interior of the glass pane. The ENCG further goes on to state that the limit for the exterior of the pane of glass will be 55 dBA.

If the sound level limits are exceeded at the windowpanes for the indoor living areas, the following Warning Clauses may be referenced:

Table 3 - Warning Clauses for Sound Level Exceedances	
Warning Clause	**Description**
Warning Clause Type A	"Purchasers/tenants are advised that sound levels due to increasing road traffic (rail traffic) (air traffic) may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."
Warning Clause Type B	"Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic (rail traffic) (air traffic) may, on occasions, interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."
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."
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."
I. Clauses taken from section C8 Warning Clauses; Environmental Noise Guidelines - 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 proposed development is not in proximity to any existing or approved stationary sources of noise. Therefore, a stationary noise analysis will not be required with respect to off-site stationary noise sources impacting the proposed residential development.

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 site is currently unoccupied with Campeau Drive to the north, commercial developments to the east and west, and the Queensway Highway 417 and a future OLRT Line to the south. Campeau Drive was identified within the 100 m radius, and the Queensway Highway 417 was identified within the 500 m radius.

Based on the new City of Ottawa Official Plan, Schedule F, Campeau Drive is considered an Arterial road, and the Queensway Highway 417 is considered a principal 400 series highway. Other roads within the 100 m radius of the proposed residential development are not classified as either arterial, collector, or major collector roads and, therefore, are not included in this study. A future OLRT Rail line is noted to be proposed within 100 m of the proposed development property boundary. However, the proposed OLRT Rail line is outside of the 100 m radius of the proposed structures, and therefore is not included in this analysis as specified by the ENCG.

All noise sources are presented in Drawing PG6934-5-Site Geometry, located in Appendix 1.

The City of Ottawa provides noise levels from road traffic, taking into consideration the right-of-way width and the implied roadway class. 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

Road	Implied Roadway	AADT (Veh/day)	Posted Speed (km/h)	Day/Night Split %	Medium Truck %	Heavy Truck %
Queensway HWY 417 East Bound	Queensway	73,332	100	92/8	7	5
Queensway HWY 417 West Bound	Queensway	73,332	100	92/8	7	5
Campeau Drive	Arterial	35,000	50	92/8	7	5
Data obtained from the City of Ottawa document ENCG or City of Ottawa Officials						

Four (4) levels of reception points were selected for this analysis. The following elevations were selected from the heights provided on the survey plan for the subject building.

Table 5 - Elevation of Reception Points

Floor Number	Elevation at the Centre of Window / Ground Surface (m)	Floor Use	Daytime/Nighttime Analysis
Ground Surface	1.5	Outdoor Living Area	Daytime
Ground Floor	1.5	Living Area/Bedroom	Daytime/Nighttime
Third Floor	7.5	Living Area/Bedroom	Daytime/Nighttime
Sixth Floor	16.5	Living Area/Bedroom	Daytime/Nighttime

For this analysis, a reception point was taken at the centre of each floor, on the ground floor, the third floor and the sixth floor. Additionally, the receptor point for the outdoor living area was taken 1.5 m above the ground surface. Reception points are detailed in Drawing PG6934-4 Receptor Location Plans presented in Appendix 1.

All horizontal distances have been measured from the reception point to the edge of the right-of-way. The roadways were analyzed where they intersected the 500 m buffer zone, which is reflected in the local angles described in Paterson Drawings PG6934-5A to 5J-Site Geometry in Appendix 1.

Table 9 - Summary of Reception Points and Geometry, located in Appendix 1, provides a summary of the points of reception and their geometry concerning the noise sources. The analysis is completed so that no effects of sound reflection off the building facade are considered, as stipulated by the ENGC. It should be noted that one receptor is assigned to the side of the building affected by noise. There is one noise source: the Queensway Highway 417. The anticipated noise at each receptor represents the worst-case scenario for the residential building.

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.

The subject site is relatively at grade with the surrounding roadways, with a geodetic elevation of approximately 95 m within the 500 m radius.

5.0 Results

Surface Transportation

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

The proposed traffic noise levels were analyzed at all reception points. The results of the STAMSON software are located in Appendix 2, and the summary of the results is noted in Table 6 below.

Table 6 – Proposed Noise Levels

Reception Point	Description	OLA (dBA)	Daytime at Facade $L_{eq(16)}$ (dBA)	Nighttime at Facade $L_{eq(8)}$ (dBA)
REC 1-1	Building B - Eastern Elevation - 1st Floor		62.85	50.27
REC 1-3	Building B - Eastern Elevation - 3rd Floor		63.96	51.83
REC 1-6	Building B - Eastern Elevation - 6th Floor		65.81	54.52
REC 2-1	Building B - Northern Elevation - 1st Floor		68.66	61.06
REC 2-3	Building B - Northern Elevation - 3rd Floor		69.28	61.68
REC 2-6	Building B - Northern Elevation - 6th Floor		70.25	62.65
REC 3-1	Building B - Southern Elevation - 1st Floor		57.36	49.77
REC 3-3	Building B - Southern Elevation - 3rd Floor		60.02	52.42
REC 3-6	Building B - Southern Elevation - 6th Floor		64.00	56.41
REC 4-1	Building A - Northern Elevation - 1st Floor		68.63	61.04
REC 4-3	Building A - Northern Elevation - 3rd Floor		69.25	61.65
REC 4-6	Building A - Northern Elevation - 6th Floor		70.20	62.61
REC 5-1	Building A - Western Elevation - 1st Floor		59.19	49.14
REC 5-3	Building A - Western Elevation - 3rd Floor		61.25	51.28
REC 5-6	Building A - Western Elevation - 6th Floor		64.51	55.32
REC 6-1	Building A - Southern Elevation - 1st Floor		58.93	51.34
REC 6-3	Building A - Southern Elevation - 3rd Floor		61.50	53.90
REC 6-6	Building A - Southern Elevation - 6th Floor		65.36	57.76

Reception Point	Description	OLA (dBA)	Daytime at Facade $L_{eq(16)}$ (dBA)	Nighttime at Facade $L_{eq(8)}$ (dBA)
REC 7-1	Building A - Eastern Elevation - 1st Floor		55.93	48.33
REC 7-3	Building A - Eastern Elevation - 3rd Floor		58.63	51.03
REC 7-6	Building A - Eastern Elevation - 6th Floor		62.7	55.1
REC 8-1	Building A - Southern Elevation - 1st Floor		54.75	47.15
REC 8-3	Building A - Southern Elevation - 3rd Floor		57.39	49.79
REC 8-6	Building A - Southern Elevation - 6th Floor		61.36	53.76
REC 9	Outdoor Living Area	67.93	-	-
REC 9 REV	Outdoor Living Area – Building Orientation	57.03	-	-
REC 9 REV 1	Outdoor Living Area – 2 m Noise Barrier	53.19		

6.0 Discussion and Recommendations

6.1 Outdoor Living Areas

One outdoor living area was analyzed as part of the current study (REC 9), located to the south of Building B. The results of the STAMSON modelling indicate that the $L_{eq\ (16)}$ from all sources was 67.93 dBA. The value for REC 9 is above the 55 dBA limit that was specified in Table 1; therefore, additional noise attenuation features will be required.

Further analysis was performed for REC 9 as it exceeded the 55 dBA threshold. In accordance with Table 2.3a (presented in Table 7) of the City of Ottawa Guidelines, several noise mitigation measures were evaluated. Due to the current orientation and size of the proposed buildings, additional setbacks are not feasible, nor is it possible to introduce noise-insensitive land between the source and receptor. The orientation of the proposed buildings was considered and is denoted in Drawing PG6934-5J. Additionally, an acoustic barrier was considered and is also presented in Drawing PG6934-5J.

Table 7 – Outdoor Living Space Noise Control Measures for Surface Transportation Noise (Table 2.3a from the ENCG of the City of Ottawa)

Primary Mitigation Measure to achieve required dBA – In order of Preference	**Secondary Mitigation Measures**	
	Landscape plantings and/or non-acoustic fence to obscure noise source	**Warning Clauses ***
1. Distance setback with soft ground;	Recommended	
1. Insertion of noise-insensitive land uses between the source and the sensitive receptor		
2. Orientation of Buildings to provide sheltered zones in rear yards	Required	Warning Clauses are necessary and to include - Reference to specific noise mitigation measures in the development - Whether noise is expected to increase in the future and - That there is a need to maintain mitigation
3. Shared outdoor amenity areas		
4. Earth Berms (sound barriers)		
5. Acoustic barriers (acoustic barriers)		

* A warning clause is necessary whenever noise is expected to meet or exceed 55dBA Leq 16 in the Outdoor Living Area or Pane of Window of any living space prior to mitigation

With the implementation of the noise-reducing measures as stated in Table 2.3a of the ENCG, the STAMSON results indicate that the sound levels were reduced to 53 dBA and therefore is considered an acceptable outdoor living area. It is further required that Warning Clause Type B be included for all deeds of sale. The acoustic barrier will be required to be constructed as per the ENCG of the City of Ottawa. Reference can be made to Drawing PG6934-5J for the noise barrier location.

Warning Clause Type B: "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic (rail traffic) (air traffic) may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."

6.2 Indoor Living Areas and Ventilation

The results of the STAMSON modelling indicate that the $L_{eq(16)}$ ranges between 54.75 dBA and 70.25 dBA. Some of the values calculated exceed the limit of 55 dBA and 65 dBA as specified by the ENCG, and therefore, Warning Clause Type D will be required to be stated on any deeds of sale.

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”

Table 8 - Summary of Warning Clauses – Indoor Living Areas

Building	Elevation	Floor	Applicable Warning Clause	Additional Considerations
A	All	All	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”
B	All	All	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."

Various receptors exceed the 65 dBA threshold for both Building A and Building B. Therefore, an analysis of the building materials will be required. However, at this time, the building materials and exterior wall construction details have not been finalized. Therefore, a review of the proposed building materials will need to be completed once the building materials have been finalized.

Proposed Construction Specifications

It is understood that typical window and wall details are proposed for the residential buildings. The effectiveness of the noise insulation can be expressed as the Acoustical Insulation Factor (AIF), calculated as follows:

$$\boldsymbol{AIF = L_{eq(16)(Exterior)} - L_{eq(16)(Interior)} + 10Log_{10}(N) + 2dBA}$$

Where:

$\boldsymbol{L_{eq(16)(Exterior)}}$: Calculated value at the windowpane

$\boldsymbol{L_{eq(16)(Interior)}}$: 45 dBA

$\boldsymbol{N}$: Number of components in the room

No floor plans or detailed design drawings were provided for this portion of the review. A conservative approach is to assume that there are 2 components per room. Therefore, the AIF would need to be at least 30 dBA.

A conversion from AIF to a Standard Transmission Class (STC) rating will require knowledge of room dimensions in addition to the wall and window dimensions. However, a conservative approach would be to increase the AIF factor by 3. **Therefore, provided the building materials of either the windows and/or the exterior walls have an STC rating of 33 or higher, this would be a sufficient noise attenuation device for both Building A and Building B.**

7.0 Summary of Findings

The subject site is located at 8201 Campeau Drive in the City of Ottawa. It is understood that the proposed residential development will consist of two six-storey buildings, denoted as Building A and Building B. The associated analysis identified two surface transportation noise sources: Queensway Highway 417 (east and west bound) and Campeau Drive.

Several reception points were selected for the analysis, consisting of panes of glass reception points on the first level, third level, sixth level and outdoor living areas.

Some of the sound levels for the proposed development exceeded the 55 dBA and 65 dBA thresholds as specified by ENCG and will require Warning Clause Type D.

A review of building materials was completed as part of this analysis for all elevations exceeding 65 dBA for both Building A and Building B. The building materials of either the windows and/or the exterior walls will require an **STC rating of 33 or higher**. Reference can be made to Appendix 3 for Building Material Industry Standards.

All warning clauses are reiterated below and are to be included on all Offers of Purchase and Sale:

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"

One outdoor living area was analyzed as part of the current study (REC 9). The results of the STAMSON modelling indicate that the $L_{eq(16)}$ from all sources was 67.93 dBA. Further analysis was performed for REC 9 as it exceeded the 55 dBA threshold. As per the recommendations provided in Table 2.3a of the ENCG, the building orientations and an acoustic barrier were considered and reduced the noise levels to 55 dBA. The noise attenuation barrier will be required to be constructed as per the ENCG of the City of Ottawa and be a minimum of 2.0 m in height. Reference can be made to Drawing PG6934-5J in Appendix 1. It is further required that Warning Clause Type B be included on all Offers of Purchase and Sale

Warning Clause Type B: "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic (rail traffic) (air traffic) may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."

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 Theberge Group 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.

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APPENDIX 1

Table 9 – Summary of Reception Points and Geometry
Drawing PG6934-3-Site Plan
Drawing PG6934-4-Receptor Location Plan
Drawing PG6934-5-Site Geometry
Drawing PG6934-5A-Site Geometry (REC 1-1, REC 1-3 & REC 1-6)
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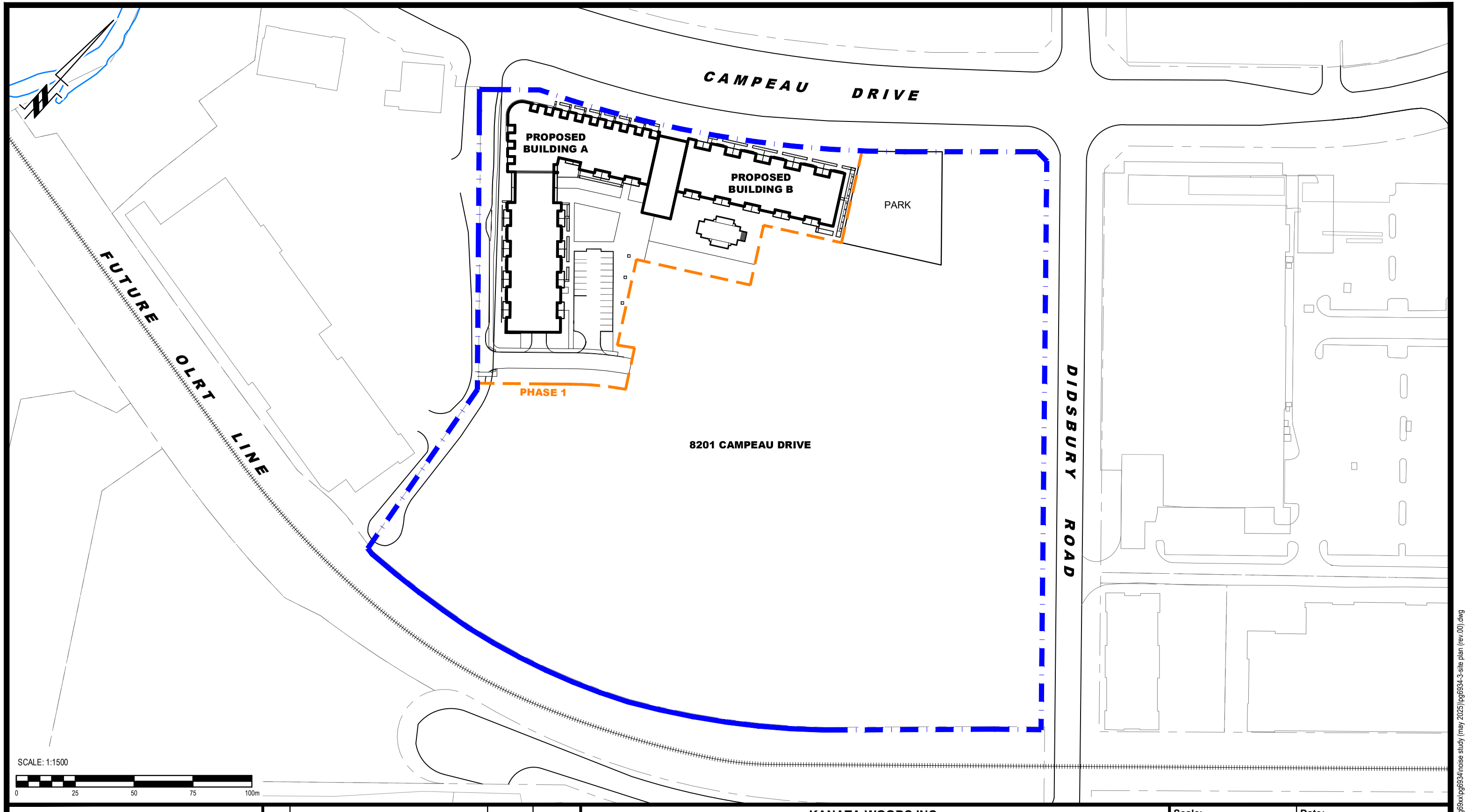
Drawing PG6934-5G-Site Geometry (REC 7-1, REC 7-3 & REC 7-6)
Drawing PG6934-5H-Site Geometry (REC 8-1, REC 8-3 & REC 8-6)
Drawing PG6934-5I-Site Geometry (REC 9)
Drawing PG6934-5J- Site Geometry (REC 9 REV)

Table 9 - Summary of Reception Points and Geometry

8201 Campeau Drive

Point of Reception	Location	Total Leq Day (dBA)	Total Leq Night (dBA)	Queensway HWY 417 East								Queensway HWY 417 West								Campeau Drive							
				Horizontal (m)	Vertical (m)	Total (m)	Local Angle (degree)	Number of Rows of Houses	Density (%)	Barrier Height (m)	Barrier Distance (m)	Horizontal (m)	Vertical (m)	Total (m)	Local Angle (degree)	Number of Rows of Houses	Density (%)	Barrier Height (m)	Barrier Distance (m)	Horizontal (m)	Vertical (m)	Total (m)	Local Angle (degree)	Number of Rows of Houses	Density (%)	Barrier Height (m)	Barrier Distance (m)
REC 1-1	Building B - Eastern Elevation - 1st Floor	62.85	50.27	440	1.5	440	-32, 0	1	20	n/a	n/a	393	1.5	393	-38, 0	1	20	n/a	n/a	37	1.5	37.03	0, 65	n/a	20	n/a	n/a
REC 1-3	Building B - Eastern Elevation - 3rd Floor	63.96	51.83	440	7.5	440.06	-32, 0	1	20	n/a	n/a	393	7.5	393.07	-38, 0	1	20	n/a	n/a	37	7.5	37.75	0, 65	n/a	n/a	n/a	n/a
REC 1-6	Building B - Eastern Elevation - 6th Floor	65.81	54.52	440	16.5	440.31	-32, 0	1	20	n/a	n/a	393	16.5	393.35	-38, 0	1	20	n/a	n/a	37	16.5	40.51	0, 65	n/a	n/a	n/a	n/a
REC 2-1	Building B - Northern Elevation - 1st Floor	68.66	61.06	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	1.5	24.05	-81, 76	n/a	n/a	n/a	n/a
REC 2-3	Building B - Northern Elevation - 3rd Floor	69.28	61.68	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	7.5	25.14	-81, 76	n/a	n/a	n/a	n/a
REC 2-6	Building B - Northern Elevation - 6th Floor	70.25	62.65	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	16.5	29.12	-81, 76	n/a	n/a	n/a	n/a
REC 3-1	Building B - Southern Elevation - 1st Floor	57.36	49.77	426	1.5	426	-35, 49	n/a	n/a	n/a	n/a	381	1.5	381	-42, 53	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 3-3	Building B - Southern Elevation - 3rd Floor	60.02	52.42	426	7.5	426.07	-35, 49	n/a	n/a	n/a	n/a	381	7.5	381.07	-42, 53	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 3-6	Building B - Southern Elevation - 6th Floor	64.00	56.41	426	16.5	426.32	-35, 49	n/a	n/a	n/a	n/a	381	16.5	381.36	-42, 53	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 4-1	Building A - Northern Elevation - 1st Floor	68.63	61.04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	1.5	24.05	-81, 74	n/a	n/a	n/a	n/a
REC 4-3	Building A - Northern Elevation - 3rd Floor	69.25	61.65	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	7.5	25.14	-81, 74	n/a	n/a	n/a	n/a
REC 4-6	Building A - Northern Elevation - 6th Floor	70.20	62.61	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	16.5	29.12	-81, 74	n/a	n/a	n/a	n/a
REC 5-1	Building A - Western Elevation - 1st Floor	59.19	49.14	410	1.5	410	0, 56	n/a	n/a	n/a	n/a	365	1.5	365	0, 61	n/a	n/a	n/a	n/a	83	1.5	83.01	0, 69	n/a	n/a	n/a	n/a
REC 5-3	Building A - Western Elevation - 3rd Floor	61.25	51.28	410	7.5	410.07	0, 56	n/a	n/a	n/a	n/a	365	7.5	365.08	0, 61	n/a	n/a	n/a	n/a	83	7.5	83.34	0, 69	n/a	n/a	n/a	n/a
REC 5-6	Building A - Western Elevation - 6th Floor	64.51	55.32	410	16.5	410.33	0, 56	n/a	n/a	n/a	n/a	365	16.5	365.37	0, 61	n/a	n/a	n/a	n/a	83	16.5	84.62	0, 69	n/a	n/a	n/a	n/a
REC 6-1	Building A - Southern Elevation - 1st Floor	58.93	51.34	364	1.5	364	-35, 62	n/a	n/a	n/a	n/a	323	1.5	323	-41, 66	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 6-3	Building A - Southern Elevation - 3rd Floor	61.50	53.90	364	7.5	364.08	-35, 62	n/a	n/a	n/a	n/a	323	7.5	323.09	-41, 66	1	20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 6-6	Building A - Southern Elevation - 6th Floor	65.36	57.76	364	16.5	364.37	-35, 62	n/a	n/a	n/a	n/a	323	16.5	323.42	-41, 66	1	20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 7-1	Building A - Eastern Elevation - 1st Floor	55.93	48.33	409	1.5	409	--63, 0	n/a	n/a	n/a	n/a	362	1.5	362	-66, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 7-3	Building A - Eastern Elevation - 3rd Floor	58.63	51.03	409	7.5	409.07	--63, 0	n/a	n/a	n/a	n/a	362	7.5	362.08	-66, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 7-6	Building A - Eastern Elevation - 6th Floor	62.7	55.1	409	16.5	409.33	--63, 0	n/a	n/a	n/a	n/a	362	16.5	362.38	-66, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 8-1	Building A - Southern Elevation - 1st Floor	54.75	47.15	427	1.5	427	-41, 5	n/a	n/a	n/a	n/a	386	1.5	386	-47, 5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 8-3	Building A - Southern Elevation - 3rd Floor	57.39	49.79	427	7.5	427.07	-41, 5	n/a	n/a	n/a	n/a	386	7.5	386.07	-47, 5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 8-6	Building A - Southern Elevation - 6th Floor	61.36	53.76	427	16.5	427.32	-41, 5	n/a	n/a	n/a	n/a	386	16.5	386.35	-47, 5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 9	Outdoor Living Area	67.93	-	413	1.5	413	-39, 48	n/a	n/a	n/a	n/a	372	1.5	372	-45, 53	n/a	n/a	n/a	n/a	52	1.5	52.02	-68, 66	n/a	n/a	n/a	n/a
REC 9 REV1	Outdoor Living Area	53.19	-	413	1.5	413	-39, 36	n/a	n/a	n/a	n/a	372	1.5	372	-45, 36	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a



PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.

NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE

OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:1500	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-3
Approved by: SB	Revision No.:

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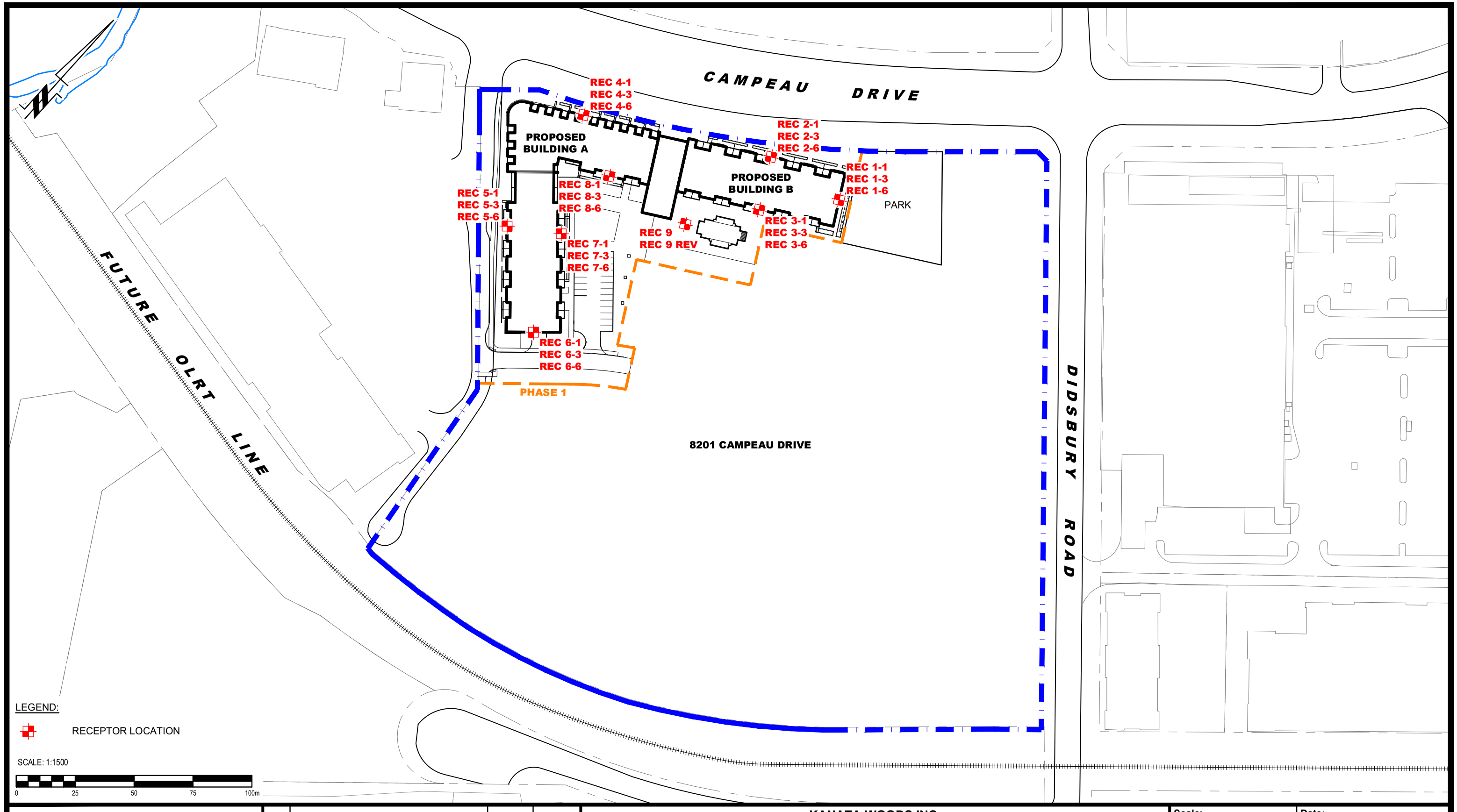

PATERSON GROUP
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TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.

NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE

OTTAWA, ONTARIO

Title:

RECEPTOR LOCATION PLAN

Scale: 1:1500	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-4
Approved by: SB	Revision No.:

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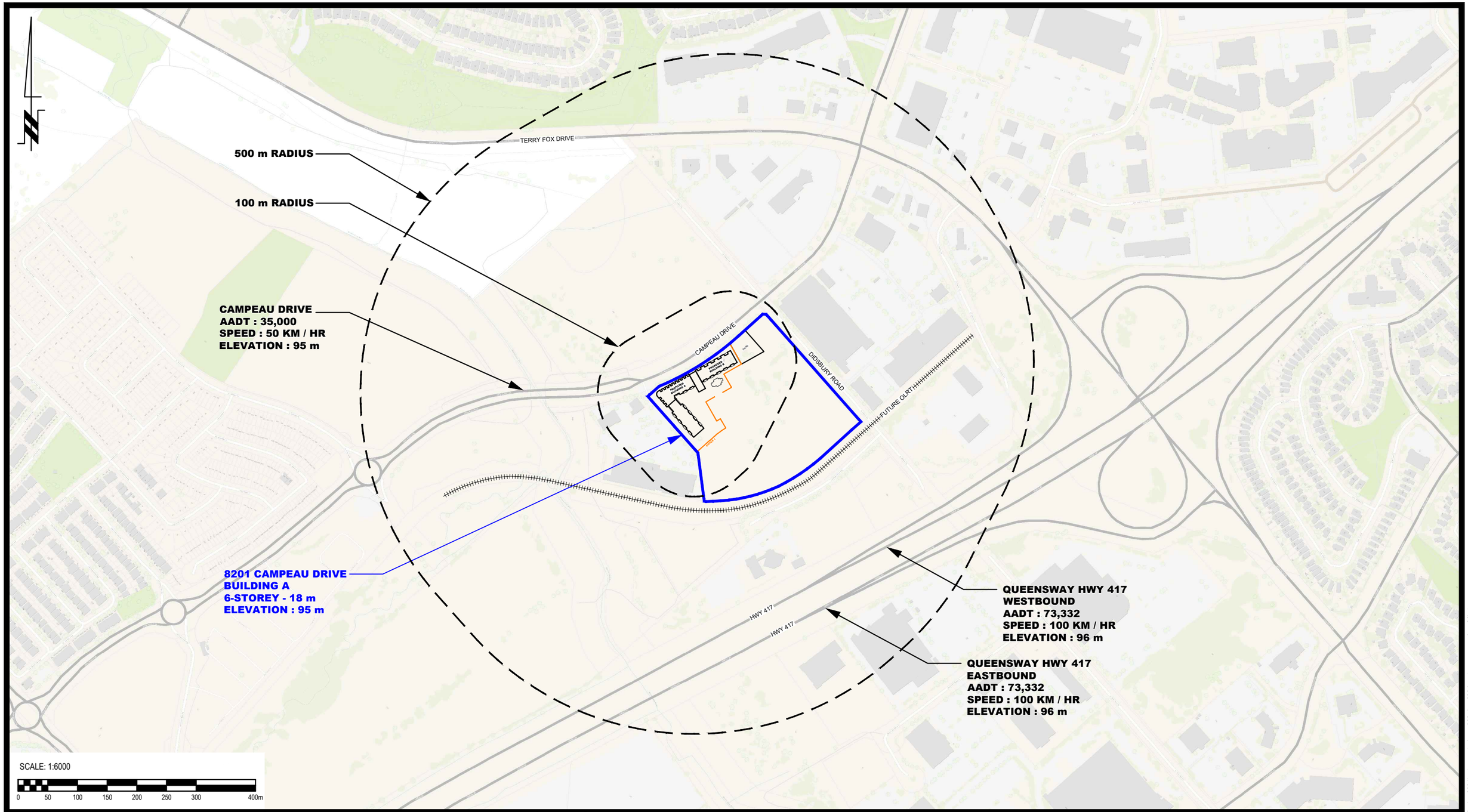

PATERSON GROUP
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TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.

NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE

OTTAWA, ONTARIO

Title:

SITE GEOMETRY

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5
Approved by: SB	Revision No.:

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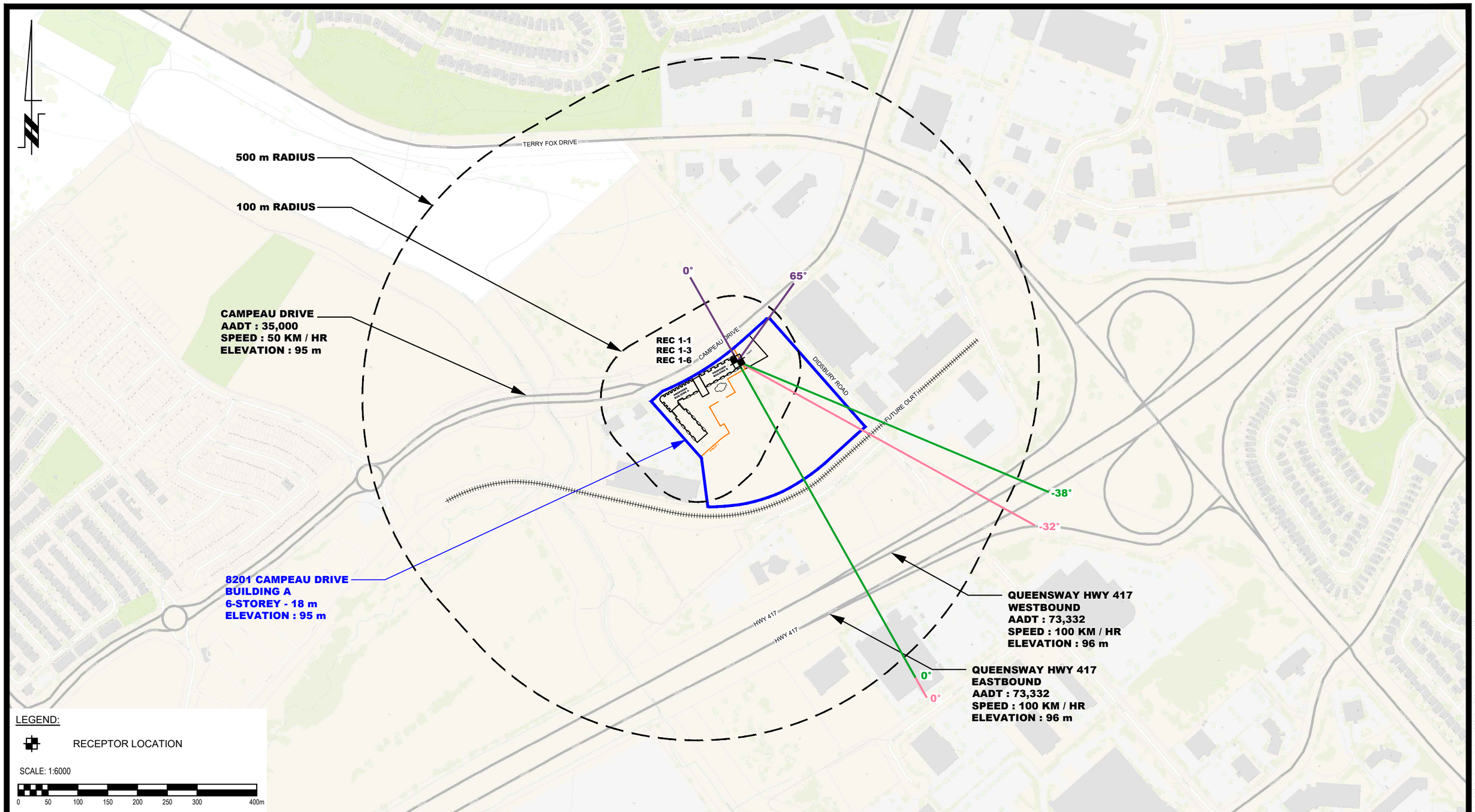

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TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.

NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE

OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 1-1, REC 1-3 AND REC 1-6

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5A
Approved by: SB	Revision No.:

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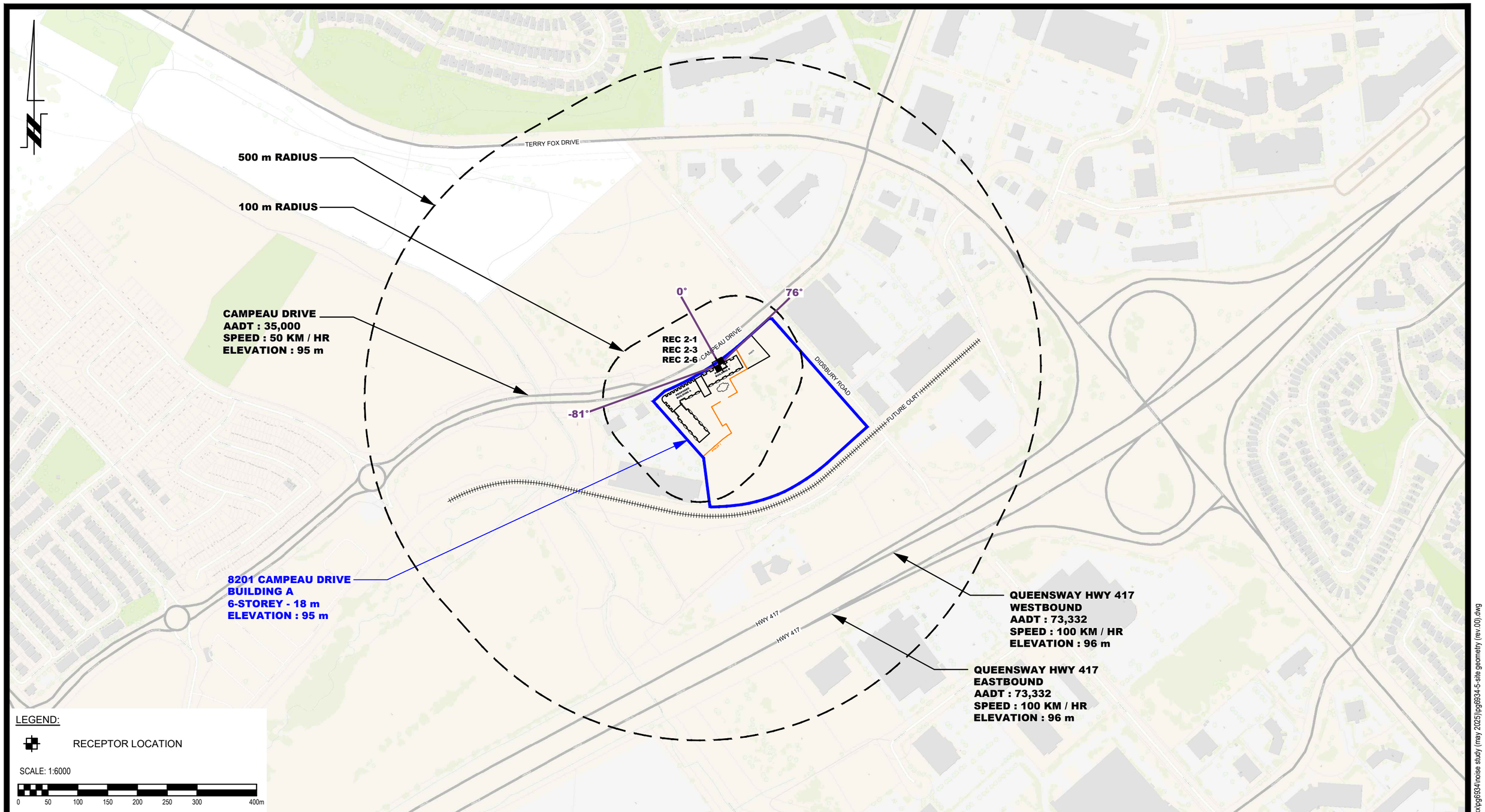

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.

NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE

OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 2-1, REC 2-3 AND REC 2-6

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5B
Approved by: SB	Revision No.:

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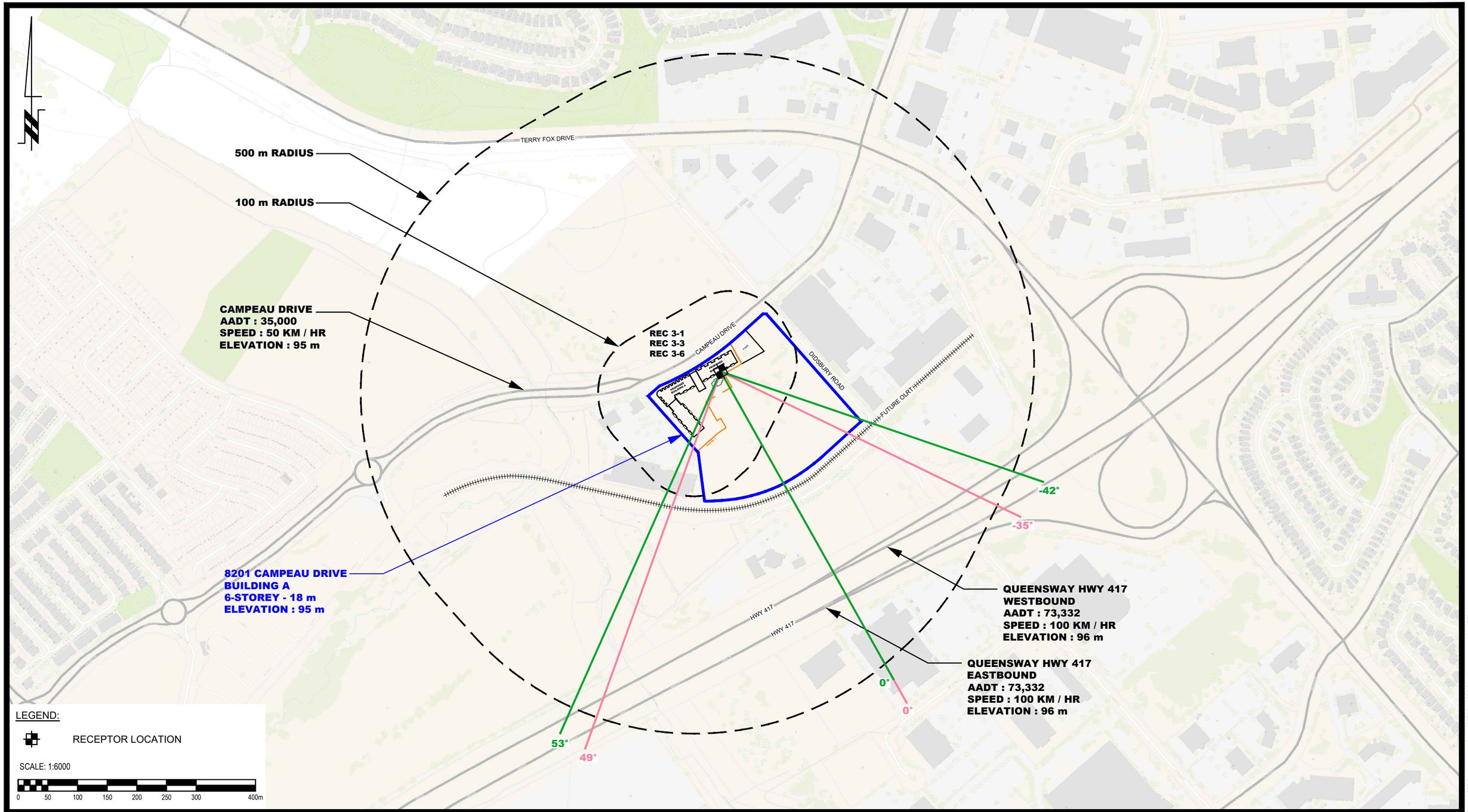

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.

NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE

OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 3-1, REC 3-3 AND REC 3-6

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5C
Approved by: SB	Revision No.:

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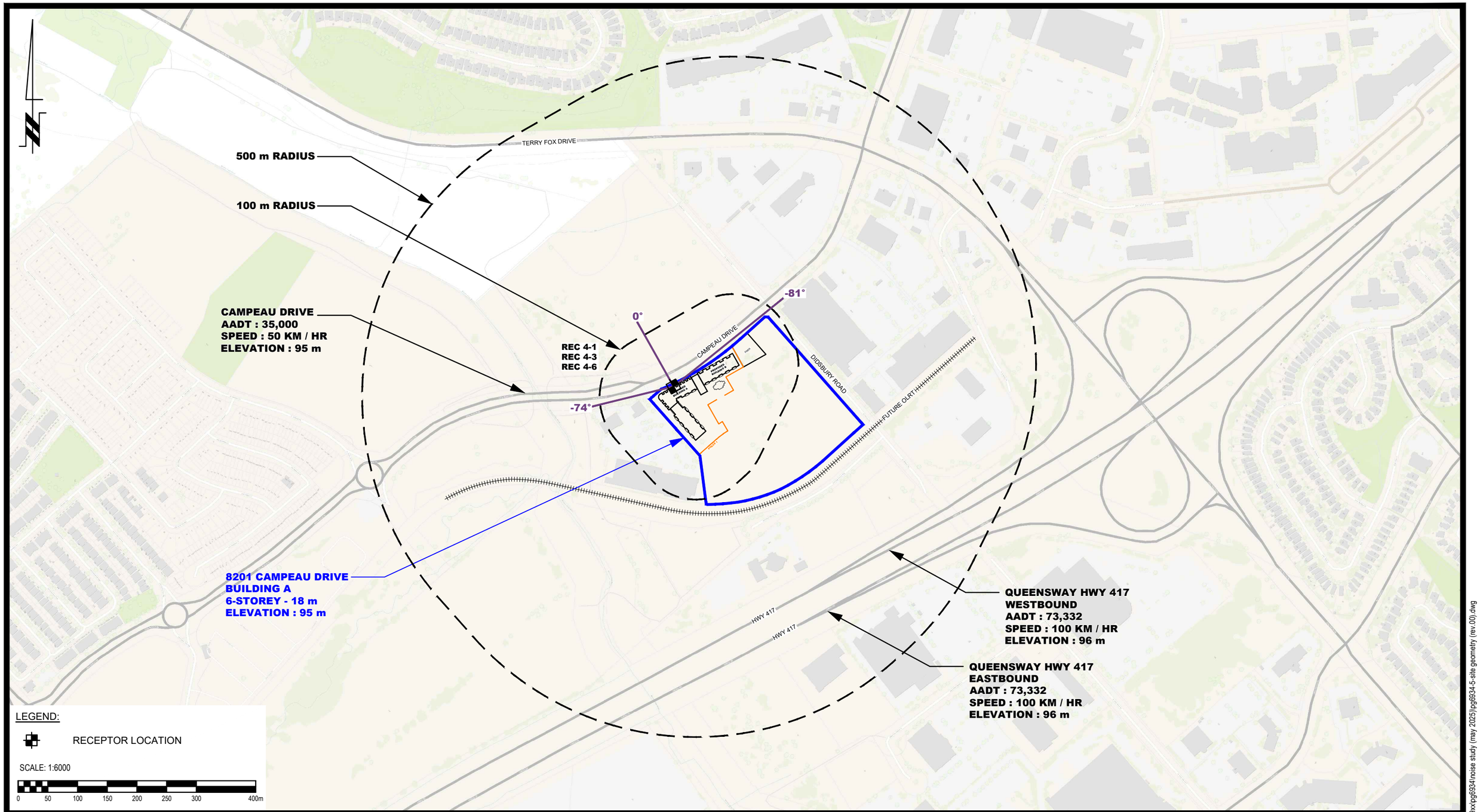

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.
NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE
OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 4-1, REC 4-3 AND REC 4-6**

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5D
Approved by: SB	Revision No.:

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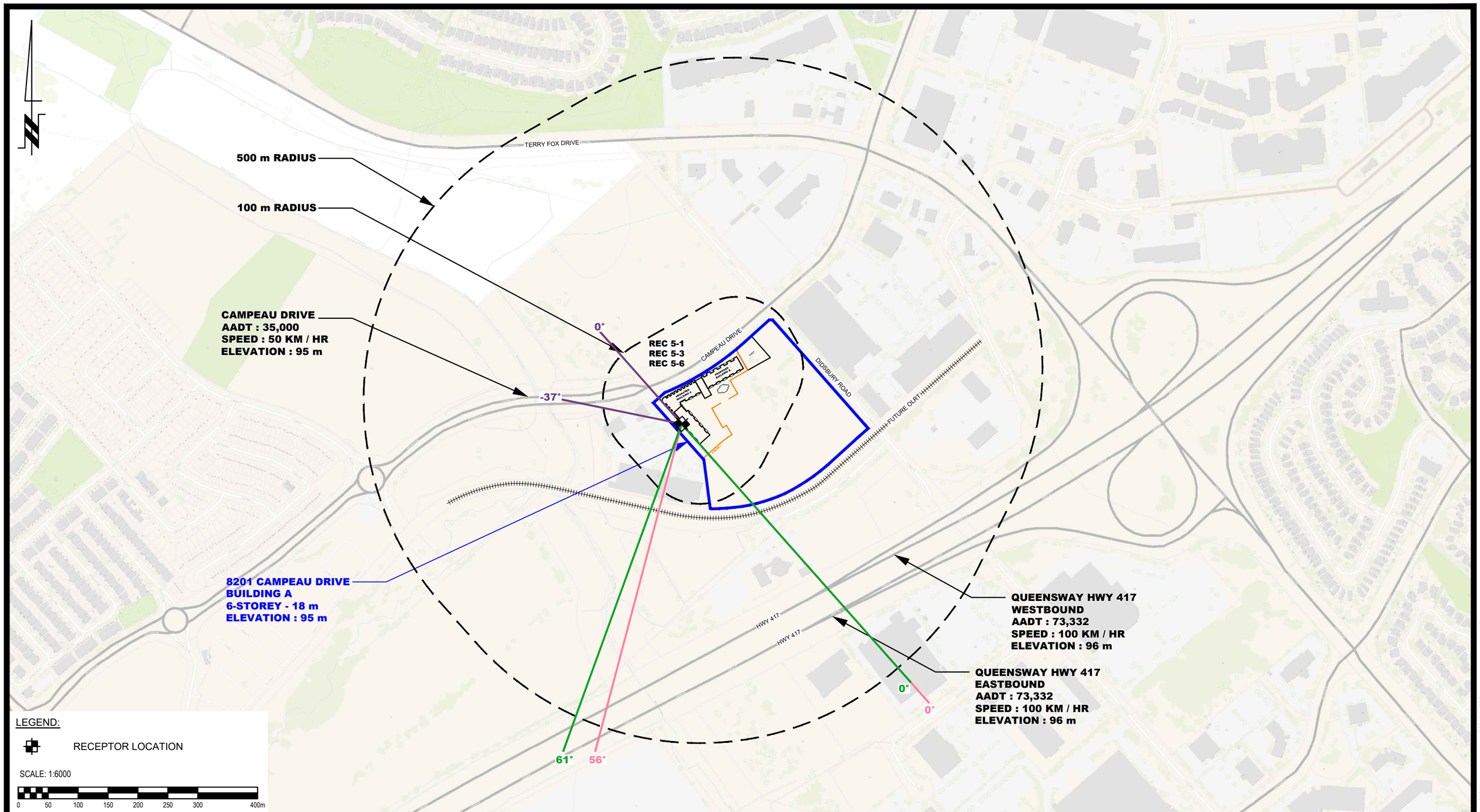

PATERSON GROUP
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OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.

NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE

OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 5-1, REC 5-3 AND REC 5-6

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5E
Approved by: SB	Revision No.:

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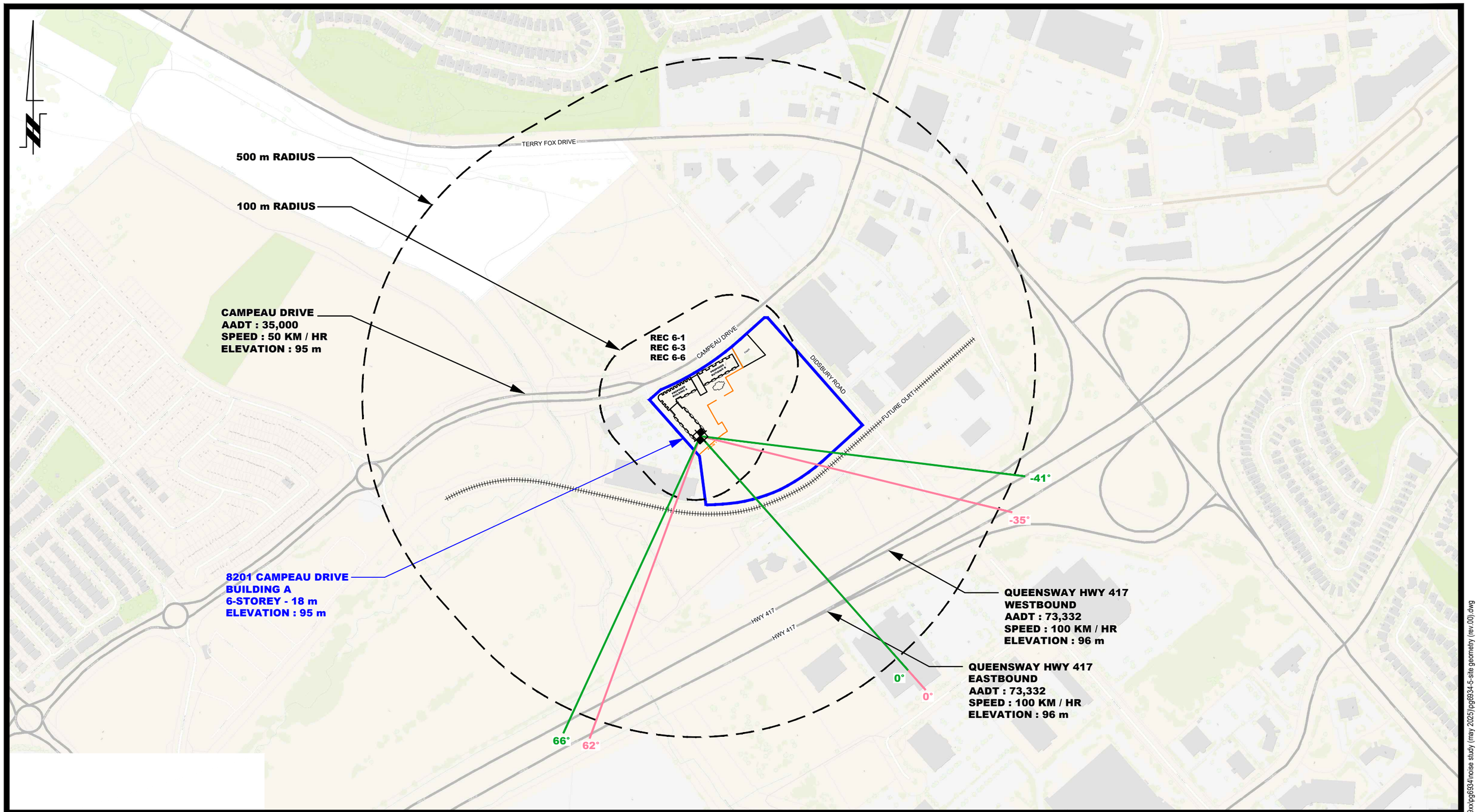

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9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.
NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE
OTTAWA, ONTARIO

Title:
SITE GEOMETRY - REC 6-1, REC 6-3 AND REC 6-6

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5F
Approved by: SB	Revision No.:

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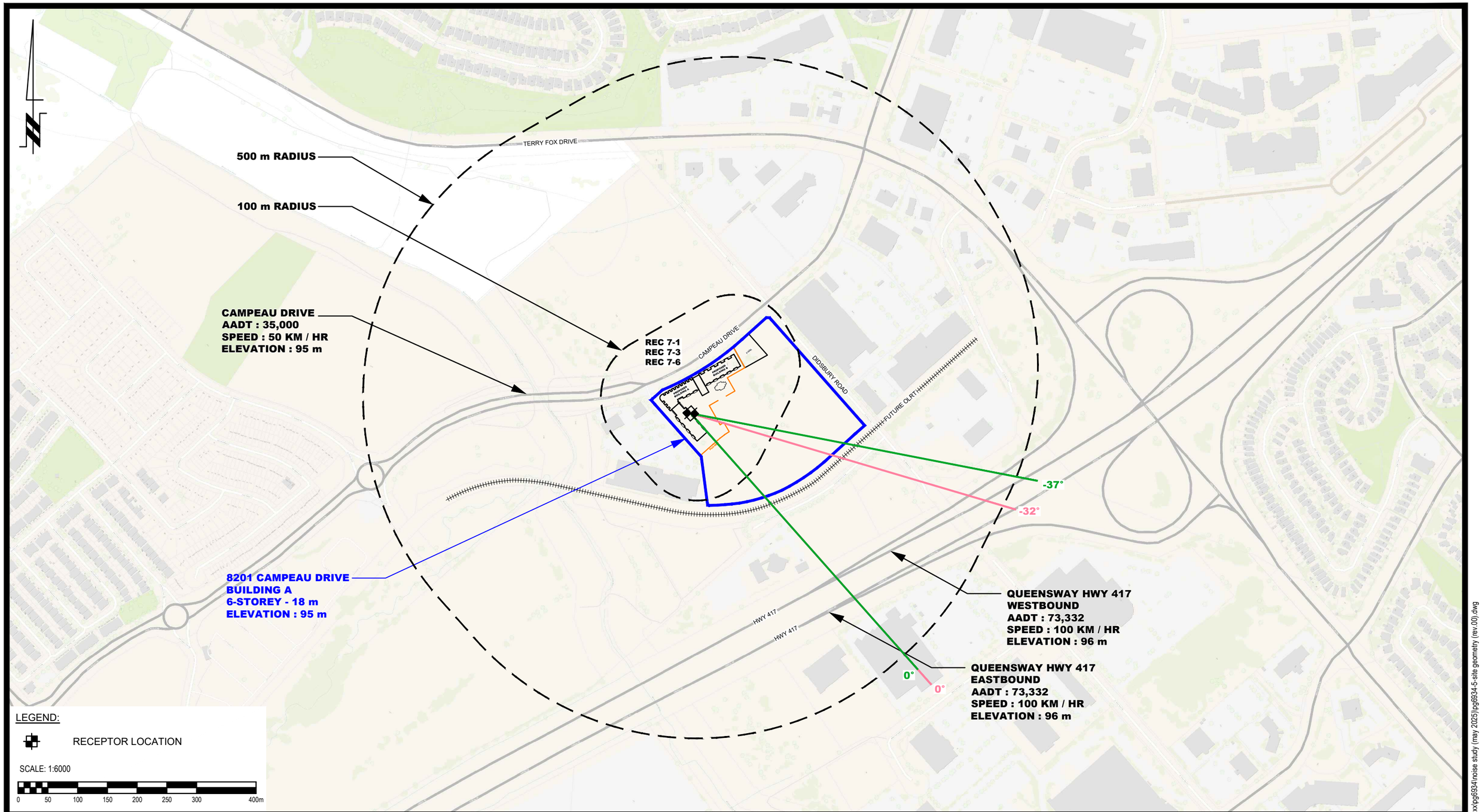

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9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.
NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE
OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 7-1, REC 7-3 AND REC 7-6**

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5G
Approved by: SB	Revision No.:

11x17

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500 m RADIUS

100 m RADIUS

CAMPEAU DRIVE
AADT : 35,000
SPEED : 50 KM / HR
ELEVATION : 95 m

REC 8-1
REC 8-3
REC 8-6

8201 CAMPEAU DRIVE
BUILDING A
6-STOREY - 18 m
ELEVATION : 95 m

QUEENSWAY HWY 417
WESTBOUND
AADT : 73,332
SPEED : 100 KM / HR
ELEVATION : 96 m

QUEENSWAY HWY 417
EASTBOUND
AADT : 73,332
SPEED : 100 KM / HR
ELEVATION : 96 m

TERRY FOX DRIVE
CAMPEAU DRIVE
DIOSBURY ROAD
FUTURE OLRT
HWY 417
HWY 417

-47°
-41°
0°
0°
5°
5°

LEGEND:

RECEPTOR LOCATION

SCALE: 1:6000

0 50 100 150 200 250 300 400m

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.
NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE
OTTAWA, ONTARIO

Title: SITE GEOMETRY - REC 8-1, REC 8-3 AND REC 8-6

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5H
Approved by: SB	Revision No.:

11x17

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500 m RADIUS

100 m RADIUS

CAMPEAU DRIVE
AADT : 35,000
SPEED : 50 KM / HR
ELEVATION : 95 m

TERRY FOX DRIVE

REC 9

CAMPEAU DRIVE

DIDSBURY ROAD

FUTURE OLRT

0°

66°

-68°

-45°

-39°

53°

48°

0°

0°

HWY 417

HWY 417

8201 CAMPEAU DRIVE
BUILDING A
6-STOREY - 18 m
ELEVATION : 95 m

QUEENSWAY HWY 417
WESTBOUND
AADT : 73,332
SPEED : 100 KM / HR
ELEVATION : 96 m

QUEENSWAY HWY 417
EASTBOUND
AADT : 73,332
SPEED : 100 KM / HR
ELEVATION : 96 m

LEGEND:

RECEPTOR LOCATION

SCALE: 1:6000

0 50 100 150 200 250 300 400m

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.
NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 9

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5I
Approved by: SB	Revision No.:

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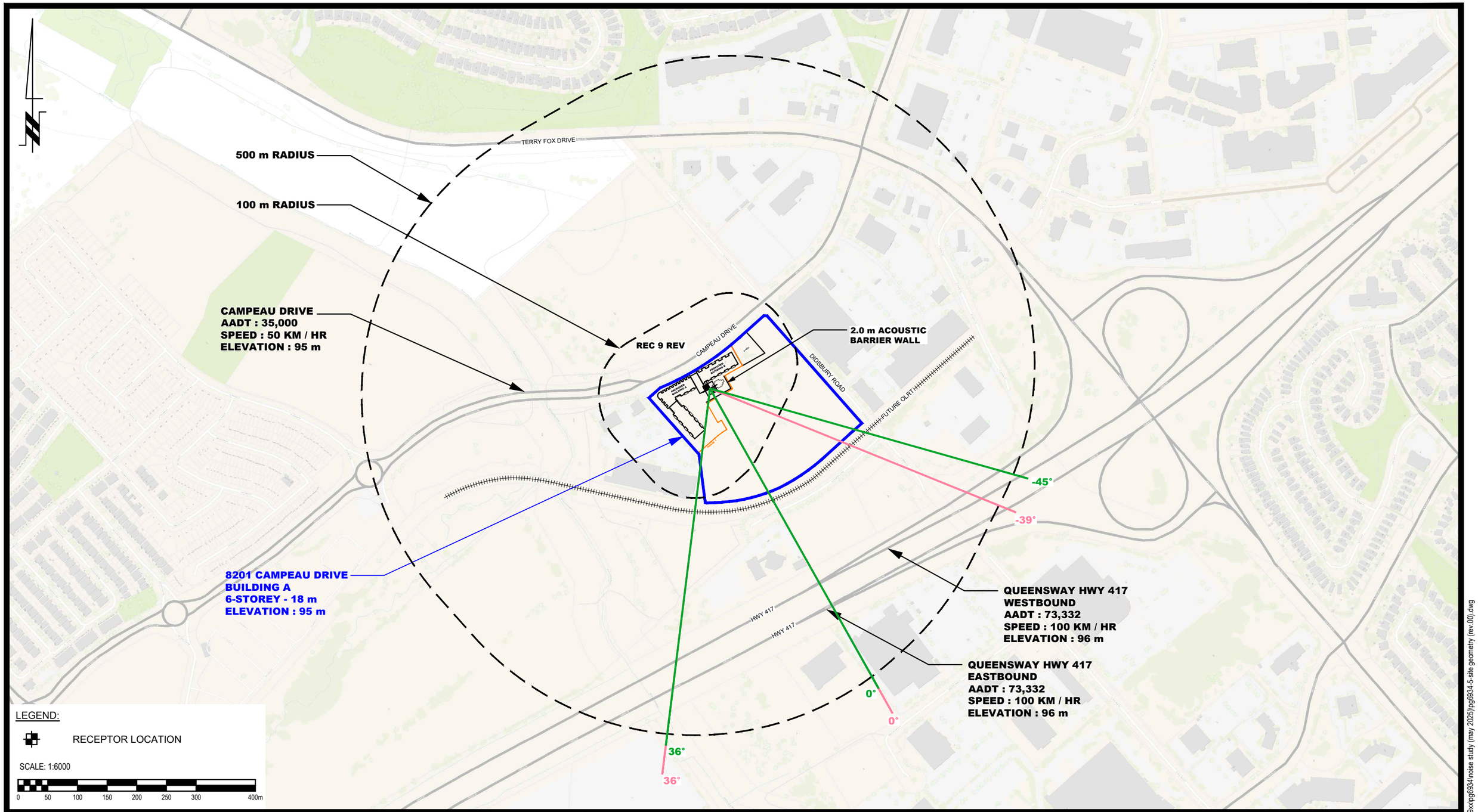

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

KANATA WOODS INC.
NOISE ATTENUATION STUDY
PROPOSED DEVELOPMENT
8201 CAMPEAU DRIVE
OTTAWA, ONTARIO

Title:
SITE GEOMETRY - REC 9 REV

Scale: 1:6000	Date: 06/2025
Drawn by: ZS	Report No.: PG6934-3
Checked by: OM	Dwg. No.: PG6934-5J
Approved by: SB	Revision No.:

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APPENDIX 2

STAMSON RESULTS

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:24:24
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

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

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -32.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 440.00 / 440.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

```
Data for Segment # 2: HWY West (day/night)
-----------------------------------------
Angle1   Angle2           : -38.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 393.00 / 393.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Campeau (day/night)
-----------------------------------------
Car traffic volume  : 30184/616   veh/TimePeriod  *
Medium truck volume :  2401/49    veh/TimePeriod  *
Heavy truck volume  :  1715/35    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):  35000
    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     :  98.00

Data for Segment # 3: Campeau (day/night)
-----------------------------------------
Angle1   Angle2           :   0.00 deg   65.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  37.00 / 37.00  m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: HWY East (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 49.39 + 0.00) = 49.39 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -32      0   0.66  81.40   0.00 -24.36  -7.65   0.00   0.00   0.00  49.39
-------------------------------------------------------------------------------
```

Segment Leq : 49.39 dBA

↟
Results segment # 2: HWY West (day)

Source height = 1.50 m

ROAD (0.00 + 50.88 + 0.00) = 50.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-38	0	0.66	81.40	0.00	-23.54	-6.97	0.00	0.00	0.00	50.88

Segment Leq : 50.88 dBA

↟
Results segment # 3: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 62.35 + 0.00) = 62.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	65	0.66	73.95	0.00	-6.51	-5.09	0.00	0.00	0.00	62.35

Segment Leq : 62.35 dBA

Total Leq All Segments: 62.85 dBA

↟
Results segment # 1: HWY East (night)

Source height = 1.49 m

ROAD (0.00 + 41.79 + 0.00) = 41.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-32	0	0.66	73.80	0.00	-24.36	-7.65	0.00	0.00	0.00	41.79

Segment Leq : 41.79 dBA

↟
Results segment # 2: HWY West (night)

Source height = 1.49 m

ROAD (0.00 + 43.28 + 0.00) = 43.28 dBA

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

```
-------------------------------------------------------------------------------
   -38      0   0.66  73.80   0.00 -23.54  -6.97   0.00   0.00   0.00  43.28
-------------------------------------------------------------------------------

Segment Leq : 43.28 dBA

↟
Results segment # 3: Campeau (night)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 48.46 + 0.00) = 48.46 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     65   0.66  60.06   0.00  -6.51  -5.09   0.00   0.00   0.00  48.46
-------------------------------------------------------------------------------

Segment Leq : 48.46 dBA

Total Leq All Segments: 50.27 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 62.85
                           (NIGHT): 50.27
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:25:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec13.te Time Period: Day/Night 16/8 hours
Description: REC 1-3

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -32.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 440.00 / 440.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -38.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 393.00 / 393.00 m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Campeau (day/night)
------------------------------------------
Car traffic volume  : 30184/616   veh/TimePeriod  *
Medium truck volume :  2401/49    veh/TimePeriod  *
Heavy truck volume  :  1715/35    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):  35000
    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     :  98.00

Data for Segment # 3: Campeau (day/night)
------------------------------------------
Angle1   Angle2           :   0.00 deg   65.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  37.00 / 37.00  m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: HWY East (day)
-----------------------------------
```

Source height = 1.50 m

ROAD (0.00 + 52.07 + 0.00) = 52.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-32	0	0.48	81.40	0.00	-21.72	-7.61	0.00	0.00	0.00	52.07

Segment Leq : 52.07 dBA

↟

Results segment # 2: HWY West (day)

Source height = 1.50 m

ROAD (0.00 + 53.49 + 0.00) = 53.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-38	0	0.48	81.40	0.00	-20.99	-6.91	0.00	0.00	0.00	53.49

Segment Leq : 53.49 dBA

↟

Results segment # 3: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 63.23 + 0.00) = 63.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	65	0.48	73.95	0.00	-5.80	-4.92	0.00	0.00	0.00	63.23

Segment Leq : 63.23 dBA

Total Leq All Segments: 63.96 dBA

↟

Results segment # 1: HWY East (night)

Source height = 1.49 m

ROAD (0.00 + 44.47 + 0.00) = 44.47 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-32	0	0.48	73.80	0.00	-21.72	-7.61	0.00	0.00	0.00	44.47

```
--------------------------------------------------------------------------------

Segment Leq : 44.47 dBA

↟
Results segment # 2: HWY West (night)
------------------------------------

Source height = 1.49 m

ROAD (0.00 + 45.89 + 0.00) = 45.89 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
--------------------------------------------------------------------------------
   -38      0   0.48  73.80   0.00 -20.99  -6.91   0.00   0.00   0.00  45.89
--------------------------------------------------------------------------------

Segment Leq : 45.89 dBA

↟
Results segment # 3: Campeau (night)
------------------------------------

Source height = 1.50 m

ROAD (0.00 + 49.33 + 0.00) = 49.33 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
--------------------------------------------------------------------------------
     0     65   0.48  60.06   0.00  -5.80  -4.92   0.00   0.00   0.00  49.33
--------------------------------------------------------------------------------

Segment Leq : 49.33 dBA

Total Leq All Segments: 51.83 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 63.96
                           (NIGHT): 51.83
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:26:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec16.te Time Period: Day/Night 16/8 hours
Description: REC 1-6

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -32.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 440.00 / 440.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -38.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 393.00 / 393.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

🡅
Road data, segment # 3: Campeau (day/night)
------------------------------------------
Car traffic volume  : 30184/616   veh/TimePeriod  *
Medium truck volume :  2401/49    veh/TimePeriod  *
Heavy truck volume  :  1715/35    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):  35000
    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     :  98.00

Data for Segment # 3: Campeau (day/night)
------------------------------------------
Angle1   Angle2           :   0.00 deg   65.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  37.00 / 37.00  m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

🡅
Results segment # 1: HWY East (day)
-----------------------------------
```

Source height = 1.50 m

ROAD (0.00 + 56.09 + 0.00) = 56.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-32	0	0.21	81.40	0.00	-17.76	-7.55	0.00	0.00	0.00	56.09

Segment Leq : 56.09 dBA

↟

Results segment # 2: HWY West (day)

Source height = 1.50 m

ROAD (0.00 + 57.41 + 0.00) = 57.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-38	0	0.21	81.40	0.00	-17.16	-6.82	0.00	0.00	0.00	57.41

Segment Leq : 57.41 dBA

↟

Results segment # 3: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 64.56 + 0.00) = 64.56 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	65	0.21	73.95	0.00	-4.75	-4.65	0.00	0.00	0.00	64.56

Segment Leq : 64.56 dBA

Total Leq All Segments: 65.81 dBA

↟

Results segment # 1: HWY East (night)

Source height = 1.49 m

ROAD (0.00 + 48.49 + 0.00) = 48.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-32	0	0.21	73.80	0.00	-17.76	-7.55	0.00	0.00	0.00	48.49

```
--------------------------------------------------------------------------------

Segment Leq : 48.49 dBA

↟
Results segment # 2: HWY West (night)
------------------------------------

Source height = 1.49 m

ROAD (0.00 + 49.81 + 0.00) = 49.81 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
--------------------------------------------------------------------------------
   -38      0   0.21  73.80   0.00 -17.16  -6.82   0.00   0.00   0.00  49.81
--------------------------------------------------------------------------------

Segment Leq : 49.81 dBA

↟
Results segment # 3: Campeau (night)
------------------------------------

Source height = 1.50 m

ROAD (0.00 + 50.67 + 0.00) = 50.67 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
--------------------------------------------------------------------------------
     0     65   0.21  60.06   0.00  -4.75  -4.65   0.00   0.00   0.00  50.67
--------------------------------------------------------------------------------

Segment Leq : 50.67 dBA

Total Leq All Segments: 54.52 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 65.81
                           (NIGHT): 54.52
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:27:35
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

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

Road data, segment # 1: Campeau (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)

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

24 hr Traffic Volume (AADT or SADT): 35000
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: Campeau (day/night)

Angle1 Angle2 : -81.00 deg 76.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 24.00 / 24.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 68.66 + 0.00) = 68.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	76	0.66	73.68	0.00	-3.39	-1.63	0.00	0.00	0.00	68.66

Segment Leq : 68.66 dBA

Total Leq All Segments: 68.66 dBA

↟
Results segment # 1: Campeau (night)

Source height = 1.50 m

ROAD (0.00 + 61.06 + 0.00) = 61.06 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	76	0.66	66.08	0.00	-3.39	-1.63	0.00	0.00	0.00	61.06

Segment Leq : 61.06 dBA

Total Leq All Segments: 61.06 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 68.66
(NIGHT): 61.06
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:28:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec23.te Time Period: Day/Night 16/8 hours
Description: REC 2-3

Road data, segment # 1: Campeau (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)

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

24 hr Traffic Volume (AADT or SADT): 35000
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: Campeau (day/night)

Angle1 Angle2 : -81.00 deg 76.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 24.00 / 24.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 69.28 + 0.00) = 69.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	76	0.48	73.68	0.00	-3.02	-1.37	0.00	0.00	0.00	69.28

Segment Leq : 69.28 dBA

Total Leq All Segments: 69.28 dBA

↟
Results segment # 1: Campeau (night)

Source height = 1.50 m

ROAD (0.00 + 61.68 + 0.00) = 61.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	76	0.48	66.08	0.00	-3.02	-1.37	0.00	0.00	0.00	61.68

Segment Leq : 61.68 dBA

Total Leq All Segments: 61.68 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 69.28
(NIGHT): 61.68

↟
↟

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:31:37
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec26.te Time Period: Day/Night 16/8 hours
Description: REC 2-6

Road data, segment # 1: Campeau (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)

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

24 hr Traffic Volume (AADT or SADT): 35000
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: Campeau (day/night)

Angle1 Angle2 : -81.00 deg 76.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 24.00 / 24.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 70.25 + 0.00) = 70.25 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	76	0.21	73.68	0.00	-2.47	-0.96	0.00	0.00	0.00	70.25

Segment Leq : 70.25 dBA

Total Leq All Segments: 70.25 dBA

↟
Results segment # 1: Campeau (night)

Source height = 1.50 m

ROAD (0.00 + 62.65 + 0.00) = 62.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	76	0.21	66.08	0.00	-2.47	-0.96	0.00	0.00	0.00	62.65

Segment Leq : 62.65 dBA

Total Leq All Segments: 62.65 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 70.25
(NIGHT): 62.65
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:46:01
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

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

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -35.00 deg 49.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 426.00 / 426.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -42.00 deg   53.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 381.00 / 381.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Results segment # 1: HWY East (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 53.67 + 0.00) = 53.67 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -35     49   0.66  81.40   0.00 -24.13  -3.60   0.00   0.00   0.00  53.67
-------------------------------------------------------------------------------

Segment Leq : 53.67 dBA

↟
Results segment # 2: HWY West (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 54.94 + 0.00) = 54.94 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -42     53   0.66  81.40   0.00 -23.32  -3.13   0.00   0.00   0.00  54.94
-------------------------------------------------------------------------------

Segment Leq : 54.94 dBA

Total Leq All Segments: 57.36 dBA

↟
Results segment # 1: HWY East (night)
-------------------------------------
```

Source height = 1.49 m

ROAD (0.00 + 46.08 + 0.00) = 46.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-35	49	0.66	73.80	0.00	-24.13	-3.60	0.00	0.00	0.00	46.08

Segment Leq : 46.08 dBA

↟

Results segment # 2: HWY West (night)

Source height = 1.49 m

ROAD (0.00 + 47.35 + 0.00) = 47.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-42	53	0.66	73.80	0.00	-23.32	-3.13	0.00	0.00	0.00	47.35

Segment Leq : 47.35 dBA

Total Leq All Segments: 49.77 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 57.36
(NIGHT): 49.77

↟
↟

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:47:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec33.te Time Period: Day/Night 16/8 hours
Description: REC 3-3

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -35.00 deg 49.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 426.00 / 426.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -42.00 deg   53.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 381.00 / 381.00 m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Results segment # 1: HWY East (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 56.36 + 0.00) = 56.36 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -35     49   0.48  81.40   0.00 -21.51  -3.52   0.00   0.00   0.00  56.36
-------------------------------------------------------------------------------

Segment Leq : 56.36 dBA

↟
Results segment # 2: HWY West (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 57.57 + 0.00) = 57.57 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -42     53   0.48  81.40   0.00 -20.79  -3.04   0.00   0.00   0.00  57.57
-------------------------------------------------------------------------------

Segment Leq : 57.57 dBA

Total Leq All Segments: 60.02 dBA

↟
Results segment # 1: HWY East (night)
-------------------------------------
```

Source height = 1.49 m

ROAD (0.00 + 48.77 + 0.00) = 48.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-35	49	0.48	73.80	0.00	-21.51	-3.52	0.00	0.00	0.00	48.77

Segment Leq : 48.77 dBA

Results segment # 2: HWY West (night)

Source height = 1.49 m

ROAD (0.00 + 49.97 + 0.00) = 49.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-42	53	0.48	73.80	0.00	-20.79	-3.04	0.00	0.00	0.00	49.97

Segment Leq : 49.97 dBA

Total Leq All Segments: 52.42 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 60.02
(NIGHT): 52.42

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:49:34
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec36.te Time Period: Day/Night 16/8 hours
Description: REC 3-6

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -35.00 deg 49.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 426.00 / 426.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -42.00 deg   53.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 381.00 / 381.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Results segment # 1: HWY East (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 60.41 + 0.00) = 60.41 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -35     49   0.21  81.40   0.00 -17.59  -3.40   0.00   0.00   0.00  60.41
-------------------------------------------------------------------------------

Segment Leq : 60.41 dBA

↟
Results segment # 2: HWY West (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 61.50 + 0.00) = 61.50 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -42     53   0.21  81.40   0.00 -17.00  -2.89   0.00   0.00   0.00  61.50
-------------------------------------------------------------------------------

Segment Leq : 61.50 dBA

Total Leq All Segments: 64.00 dBA

↟
Results segment # 1: HWY East (night)
-------------------------------------
```

Source height = 1.49 m

ROAD (0.00 + 52.81 + 0.00) = 52.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-35	49	0.21	73.80	0.00	-17.59	-3.40	0.00	0.00	0.00	52.81

Segment Leq : 52.81 dBA

Results segment # 2: HWY West (night)

Source height = 1.49 m

ROAD (0.00 + 53.91 + 0.00) = 53.91 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-42	53	0.21	73.80	0.00	-17.00	-2.89	0.00	0.00	0.00	53.91

Segment Leq : 53.91 dBA

Total Leq All Segments: 56.41 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.00
(NIGHT): 56.41

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:51:19
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec41.te Time Period: Day/Night 16/8 hours
Description: REC 4-1

Road data, segment # 1: Campeau (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)

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

24 hr Traffic Volume (AADT or SADT): 35000
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: Campeau (day/night)

Angle1 Angle2 : -81.00 deg 74.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 24.00 / 24.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 68.63 + 0.00) = 68.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	74	0.66	73.68	0.00	-3.39	-1.65	0.00	0.00	0.00	68.63

Segment Leq : 68.63 dBA

Total Leq All Segments: 68.63 dBA

↟
Results segment # 1: Campeau (night)

Source height = 1.50 m

ROAD (0.00 + 61.04 + 0.00) = 61.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	74	0.66	66.08	0.00	-3.39	-1.65	0.00	0.00	0.00	61.04

Segment Leq : 61.04 dBA

Total Leq All Segments: 61.04 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 68.63
(NIGHT): 61.04
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:51:56
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC43.te Time Period: Day/Night 16/8 hours
Description: REC 4-3

Road data, segment # 1: Campeau (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)

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

24 hr Traffic Volume (AADT or SADT): 35000
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: Campeau (day/night)

Angle1 Angle2 : -81.00 deg 74.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 24.00 / 24.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 69.25 + 0.00) = 69.25 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	74	0.48	73.68	0.00	-3.02	-1.41	0.00	0.00	0.00	69.25

Segment Leq : 69.25 dBA

Total Leq All Segments: 69.25 dBA

↟
Results segment # 1: Campeau (night)

Source height = 1.50 m

ROAD (0.00 + 61.65 + 0.00) = 61.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	74	0.48	66.08	0.00	-3.02	-1.41	0.00	0.00	0.00	61.65

Segment Leq : 61.65 dBA

Total Leq All Segments: 61.65 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 69.25
(NIGHT): 61.65

↟
↟

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:52:37
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC46.te Time Period: Day/Night 16/8 hours
Description: REC 4-6

Road data, segment # 1: Campeau (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)

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

24 hr Traffic Volume (AADT or SADT): 35000
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: Campeau (day/night)

Angle1 Angle2 : -81.00 deg 74.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 24.00 / 24.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 70.20 + 0.00) = 70.20 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	74	0.21	73.68	0.00	-2.47	-1.00	0.00	0.00	0.00	70.20

Segment Leq : 70.20 dBA

Total Leq All Segments: 70.20 dBA

↟
Results segment # 1: Campeau (night)

Source height = 1.50 m

ROAD (0.00 + 62.61 + 0.00) = 62.61 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	74	0.21	66.08	0.00	-2.47	-1.00	0.00	0.00	0.00	62.61

Segment Leq : 62.61 dBA

Total Leq All Segments: 62.61 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 70.20
(NIGHT): 62.61
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 14:56:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC51.te Time Period: Day/Night 16/8 hours
Description: REC 5-1

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : 0.00 deg 56.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 410.00 / 410.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

♠
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           :   0.00 deg   61.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 365.00 / 365.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Road data, segment # 3: Campeau (day/night)
------------------------------------------
Car traffic volume  : 30184/616   veh/TimePeriod  *
Medium truck volume :  2401/49    veh/TimePeriod  *
Heavy truck volume  :  1715/35    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):  35000
    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     :  98.00

Data for Segment # 3: Campeau (day/night)
------------------------------------------
Angle1   Angle2           :   0.00 deg   69.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  83.00 / 83.00  m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Results segment # 1: HWY East (day)
-----------------------------------
```

Source height = 1.50 m

ROAD (0.00 + 51.99 + 0.00) = 51.99 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	56	0.66	81.40	0.00	-23.85	-5.56	0.00	0.00	0.00	51.99

Segment Leq : 51.99 dBA

↟
Results segment # 2: HWY West (day)

Source height = 1.50 m

ROAD (0.00 + 53.10 + 0.00) = 53.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	61	0.66	81.40	0.00	-23.01	-5.28	0.00	0.00	0.00	53.10

Segment Leq : 53.10 dBA

↟
Results segment # 3: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 56.69 + 0.00) = 56.69 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	69	0.66	73.95	0.00	-12.33	-4.93	0.00	0.00	0.00	56.69

Segment Leq : 56.69 dBA

Total Leq All Segments: 59.19 dBA

↟
Results segment # 1: HWY East (night)

Source height = 1.49 m

ROAD (0.00 + 44.39 + 0.00) = 44.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	56	0.66	73.80	0.00	-23.85	-5.56	0.00	0.00	0.00	44.39

Segment Leq : 44.39 dBA

↟
Results segment # 2: HWY West (night)

Source height = 1.49 m

ROAD (0.00 + 45.51 + 0.00) = 45.51 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	61	0.66	73.80	0.00	-23.01	-5.28	0.00	0.00	0.00	45.51

Segment Leq : 45.51 dBA

↟
Results segment # 3: Campeau (night)

Source height = 1.50 m

ROAD (0.00 + 42.80 + 0.00) = 42.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	69	0.66	60.06	0.00	-12.33	-4.93	0.00	0.00	0.00	42.80

Segment Leq : 42.80 dBA

Total Leq All Segments: 49.14 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 59.19
(NIGHT): 49.14
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 12-06-2025 15:49:22
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC53.te Time Period: Day/Night 16/8 hours
Description: REC 5-3

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : 0.00 deg 56.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 410.00 / 410.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

```
Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           :   0.00 deg   61.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 365.00 / 365.00 m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Campeau (day/night)
-------------------------------------------
Car traffic volume  : 30184/616   veh/TimePeriod  *
Medium truck volume :  2401/49    veh/TimePeriod  *
Heavy truck volume  :  1715/35    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):  35000
    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     :  98.00

Data for Segment # 3: Campeau (day/night)
-----------------------------------------
Angle1   Angle2           :   0.00 deg   69.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  83.00 / 83.00  m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: HWY East (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 54.70 + 0.00) = 54.70 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     56   0.48  81.40   0.00 -21.27  -5.43   0.00   0.00   0.00  54.70
-------------------------------------------------------------------------------
```

Segment Leq : 54.70 dBA

↟
Results segment # 2: HWY West (day)

Source height = 1.50 m

ROAD (0.00 + 55.75 + 0.00) = 55.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	61	0.48	81.40	0.00	-20.52	-5.13	0.00	0.00	0.00	55.75

Segment Leq : 55.75 dBA

↟
Results segment # 3: Campeau (day)

Source height = 1.50 m

ROAD (0.00 + 58.22 + 0.00) = 58.22 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	69	0.48	73.95	0.00	-11.00	-4.73	0.00	0.00	0.00	58.22

Segment Leq : 58.22 dBA

Total Leq All Segments: 61.25 dBA

↟
Results segment # 1: HWY East (night)

Source height = 1.49 m

ROAD (0.00 + 47.11 + 0.00) = 47.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	56	0.48	73.80	0.00	-21.27	-5.43	0.00	0.00	0.00	47.11

Segment Leq : 47.11 dBA

↟
Results segment # 2: HWY West (night)

Source height = 1.49 m

ROAD (0.00 + 48.15 + 0.00) = 48.15 dBA

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

```
-------------------------------------------------------------------------------
     0     61   0.48  73.80   0.00 -20.52  -5.13   0.00   0.00   0.00  48.15
-------------------------------------------------------------------------------

Segment Leq : 48.15 dBA

♠
Results segment # 3: Campeau (night)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 44.33 + 0.00) = 44.33 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     69   0.48  60.06   0.00 -11.00  -4.73   0.00   0.00   0.00  44.33
-------------------------------------------------------------------------------

Segment Leq : 44.33 dBA

Total Leq All Segments: 51.58 dBA

♠



TOTAL Leq FROM ALL SOURCES (DAY): 61.25
                           (NIGHT): 51.58
♠
♠
```

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 16:04:20
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC56.te Time Period: Day/Night 16/8 hours
Description: REC 5-6

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : 0.00 deg 56.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 410.00 / 410.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           :   0.00 deg   61.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 365.00 / 365.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

🠝
Road data, segment # 3: Campeau (day/night)
------------------------------------------
Car traffic volume  : 30184/616   veh/TimePeriod  *
Medium truck volume :  2401/49    veh/TimePeriod  *
Heavy truck volume  :  1715/35    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):  35000
    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     :  98.00

Data for Segment # 3: Campeau (day/night)
------------------------------------------
Angle1   Angle2           :   0.00 deg   69.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  83.00 / 83.00  m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

🠝
Result summary (day)
--------------------
```

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.50	58.78	58.78
2.HWY West	1.50	59.73	59.73
3.Campeau	1.50	60.54	60.54
Total			64.51 dBA

Result summary (night)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.49	51.18	51.18
2.HWY West	1.49	52.13	52.13
3.Campeau	1.50	46.64	46.64
Total			55.32 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.51
(NIGHT): 55.32

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 34:31:56
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC61.te Time Period: Day/Night 16/8 hours
Description: REC 6-1

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -35.00 deg 62.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 364.00 / 364.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -41.00 deg   66.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 323.00 / 323.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

Result summary (day)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.50	55.27	55.27
2.HWY West	1.50	56.49	56.49
Total			58.93 dBA

↟

Result summary (night)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.49	47.68	47.68
2.HWY West	1.49	48.89	48.89
Total			51.34 dBA

↟

```
TOTAL Leq FROM ALL SOURCES (DAY): 58.93
                           (NIGHT): 51.34
```

↟

↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 34:32:46
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC63.te Time Period: Day/Night 16/8 hours
Description: REC 6-3

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -35.00 deg 62.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 364.00 / 364.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -41.00 deg   66.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 323.00 / 323.00 m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

Result summary (day)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.50	57.88	57.88
2.HWY West	1.50	59.02	59.02
Total			61.50 dBA

↟

Result summary (night)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.49	50.28	50.28
2.HWY West	1.49	51.42	51.42
Total			53.90 dBA

↟

```
TOTAL Leq FROM ALL SOURCES (DAY): 61.50
                           (NIGHT): 53.90
```

↟

↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 34:37:15
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC66.te Time Period: Day/Night 16/8 hours
Description: REC 6-6

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -35.00 deg 62.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 364.00 / 364.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -41.00 deg   66.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 323.00 / 323.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

Result summary (day)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.50	61.80	61.80
2.HWY West	1.50	62.83	62.83
Total			65.36 dBA

↟

Result summary (night)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.49	54.20	54.20
2.HWY West	1.49	55.23	55.23
Total			57.76 dBA

↟

```
TOTAL Leq FROM ALL SOURCES (DAY): 65.36
                           (NIGHT): 57.76
```

↟

↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 35:10:50
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC71.te Time Period: Day/Night 16/8 hours
Description: REC 7-1

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -63.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 409.00 / 409.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -66.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 362.00 / 362.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Result summary (day)
--------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.50 !    52.38 !    52.38
 2.HWY West         !     1.50 !    53.40 !    53.40
--------------------+----------+----------+----------
                      Total                   55.93 dBA
```

↟

```
Result summary (night)
----------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.49 !    44.78 !    44.78
 2.HWY West         !     1.49 !    45.80 !    45.80
--------------------+----------+----------+----------
                      Total                   48.33 dBA
```

↟

```
TOTAL Leq FROM ALL SOURCES (DAY): 55.93
                           (NIGHT): 48.33
```

↟

↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 35:11:52
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC73.te Time Period: Day/Night 16/8 hours
Description: REC 7-3

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -63.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 409.00 / 409.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -66.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 362.00 / 362.00 m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Result summary (day)
--------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.50 !    55.12 !    55.12
 2.HWY West         !     1.50 !    56.06 !    56.06
--------------------+----------+----------+----------
                      Total                  58.63 dBA
```

↟

```
Result summary (night)
----------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.49 !    47.53 !    47.53
 2.HWY West         !     1.49 !    48.46 !    48.46
--------------------+----------+----------+----------
                      Total                  51.03 dBA
```

↟

```
TOTAL Leq FROM ALL SOURCES (DAY): 58.63
                           (NIGHT): 51.03
```

↟

↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 35:26:15
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC76.te Time Period: Day/Night 16/8 hours
Description: REC 7-6

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -63.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 409.00 / 409.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -66.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 362.00 / 362.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Result summary (day)
--------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.50 !    59.26 !    59.26
 2.HWY West         !     1.50 !    60.08 !    60.08
--------------------+----------+----------+----------
                      Total                   62.70 dBA
```

↟

```
Result summary (night)
----------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.49 !    51.66 !    51.66
 2.HWY West         !     1.49 !    52.48 !    52.48
--------------------+----------+----------+----------
                      Total                   55.10 dBA
```

↟

```
TOTAL Leq FROM ALL SOURCES (DAY): 62.70
                           (NIGHT): 55.10
```

↟

↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 35:33:48
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec81.te Time Period: Day/Night 16/8 hours
Description: REC 8-1

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -41.00 deg 5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 427.00 / 427.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -47.00 deg   5.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 386.00 / 386.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Result summary (day)
--------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.50 !    51.11 !    51.11
 2.HWY West         !     1.50 !    52.29 !    52.29
--------------------+----------+----------+----------
                      Total                   54.75 dBA
```

↟

```
Result summary (night)
----------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.49 !    43.51 !    43.51
 2.HWY West         !     1.49 !    44.69 !    44.69
--------------------+----------+----------+----------
                      Total                   47.15 dBA
```

↟

```
TOTAL Leq FROM ALL SOURCES (DAY): 54.75
                           (NIGHT): 47.15
```

↟

↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 35:34:31
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC83.te Time Period: Day/Night 16/8 hours
Description: REC 8-3

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -41.00 deg 5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 427.00 / 427.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -47.00 deg   5.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 386.00 / 386.00 m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Result summary (day)
--------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.50 !    53.78 !    53.78
 2.HWY West         !     1.50 !    54.90 !    54.90
--------------------+----------+----------+----------
                      Total                  57.39 dBA
```

↟

```
Result summary (night)
----------------------

                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+----------+----------+----------
 1.HWY East         !     1.49 !    46.18 !    46.18
 2.HWY West         !     1.49 !    47.31 !    47.31
--------------------+----------+----------+----------
                      Total                  49.79 dBA
```

↟

```
TOTAL Leq FROM ALL SOURCES (DAY): 57.39
                           (NIGHT): 49.79
```

↟

↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 35:35:27
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC86.te Time Period: Day/Night 16/8 hours
Description: REC 8-6

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -41.00 deg 5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 427.00 / 427.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -47.00 deg   5.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 386.00 / 386.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

Result summary (day)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.50	57.80	57.80
2.HWY West	1.50	58.84	58.84
Total			61.36 dBA

↟

Result summary (night)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.49	50.20	50.20
2.HWY West	1.49	51.24	51.24
Total			53.76 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 61.36
(NIGHT): 53.76

↟
↟

STAMSON 5.0 SUMMARY REPORT Date: 12-06-2025 37:29:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec10.te Time Period: Day/Night 16/8 hours
Description: REC 10

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -39.00 deg 48.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 413.00 / 413.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -45.00 deg   53.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 372.00 / 372.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Road data, segment # 3: CAMPEAU (day/night)
------------------------------------------
Car traffic volume  : 30184/616   veh/TimePeriod  *
Medium truck volume :  2401/49    veh/TimePeriod  *
Heavy truck volume  :  1715/35    veh/TimePeriod  *
Posted speed limit  :   100 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):  35000
    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     :  98.00

Data for Segment # 3: CAMPEAU (day/night)
------------------------------------------
Angle1   Angle2           : -68.00 deg   66.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  52.00 / 52.00  m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Result summary (day)
--------------------
```

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.50	54.04	54.04
2.HWY West	1.50	55.24	55.24
3.CAMPEAU	1.50	67.50	67.50
Total			67.93 dBA

Result summary (night)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.HWY East	1.49	46.45	46.45
2.HWY West	1.49	47.64	47.64
3.CAMPEAU	1.50	53.61	53.61
Total			55.21 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 67.93
(NIGHT): 55.21

STAMSON 5.0 NORMAL REPORT Date: 16-06-2025 10:27:17
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: REC10R1.te Time Period: Day/Night 16/8 hours
Description: REC 10 REV1

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

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
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: HWY East (day/night)

Angle1 Angle2 : -39.00 deg 36.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 413.00 / 413.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -39.00 deg Angle2 : 36.00 deg
Barrier height : 2.00 m
Barrier receiver distance : 10.00 / 10.00 m
Source elevation : 66.00 m
Receiver elevation : 66.00 m
Barrier elevation : 66.00 m
Reference angle : 0.00

↑
Road data, segment # 2: HWY West (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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):  73332
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: HWY West (day/night)
------------------------------------------
Angle1   Angle2           : -45.00 deg   36.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 372.00 / 372.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -45.00 deg   Angle2 : 36.00 deg
Barrier height            :   2.00 m
Barrier receiver distance :  10.00 / 10.00  m
Source elevation          :  66.00 m
Receiver elevation        :  66.00 m
Barrier elevation         :  66.00 m
Reference angle           :   0.00

↟
Results segment # 1: HWY East (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 !        1.50 !        67.50

ROAD (0.00 + 49.65 + 0.00) = 49.65 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -39     36   0.54  81.40   0.00 -22.18  -3.98   0.00   0.00  -5.60  49.65
-------------------------------------------------------------------------------

Segment Leq : 49.65 dBA

↟
Results segment # 2: HWY West (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 !        1.50 !        67.50

ROAD (0.00 + 50.65 + 0.00) = 50.65 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -45     36   0.54  81.40   0.00 -21.48  -3.68   0.00   0.00  -5.59  50.65
-------------------------------------------------------------------------------

Segment Leq : 50.65 dBA

Total Leq All Segments: 53.19 dBA

↟
Results segment # 1: HWY East (night)
-------------------------------------

Source height = 1.49 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.49 !        1.50 !        1.50 !        67.50

ROAD (0.00 + 42.05 + 0.00) = 42.05 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -39     36   0.54  73.80   0.00 -22.18  -3.98   0.00   0.00  -5.60  42.05
-------------------------------------------------------------------------------

Segment Leq : 42.05 dBA

↟
Results segment # 2: HWY West (night)
-------------------------------------

Source height = 1.49 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.49 !        1.50 !        1.50 !        67.50

ROAD (0.00 + 43.05 + 0.00) = 43.05 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -45     36   0.54  73.80   0.00 -21.48  -3.68   0.00   0.00  -5.59  43.05
-------------------------------------------------------------------------------
```

Segment Leq : 43.05 dBA

Total Leq All Segments: 45.59 dBA

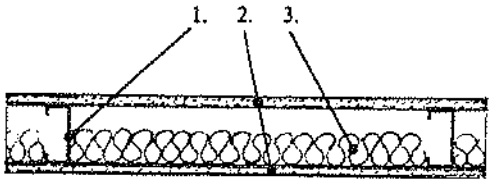
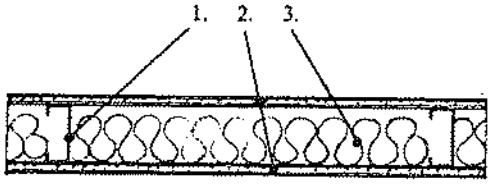
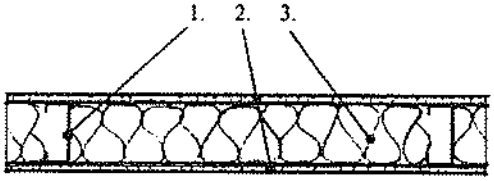
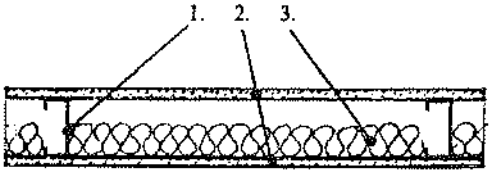
↟

TOTAL Leq FROM ALL SOURCES (DAY): 53.19
(NIGHT): 45.59

↟
↟

APPENDIX 3

INDUSTRY STANDARDS

Sketch	Brief Description	...	Laboratory Test Number Year Frequencies Tested Source of Data	STC	Section Number
	1. 3 5/8" metal studs, 24"o.c. 2. 5/8" gypsum board screwed to studs. 3. 2" thick sound attenuation blanket.	...	National Research Council of Canada NRC #66 1968 16f National Research Council of Canada	47	1.3.3.1.5.7
	1. 3 5/8" metal studs, 24"o.c. 2. 5/8" type X gypsum board screwed to studs. 3. 3" thick sound attenuation blanket.	...	Owens/Corning Fiberglas OCF 469 1967 16f Owens/Corning Fiberglas	44	1.3.3.1.5.8
	1. 3 5/8" metal studs, 24"o.c. 2. 5/8" gypsum board screwed to studs. 3. 4" thick sound attenuation blanket compressed to fit in stud space.	...	National Research Council of Canada NRC #66 1968 16f National Research Council of Canada	45	1.3.3.1.5.9
	1. 3 5/8" metal studs, 24"o.c. 2. 5/8" type X gypsum board spot-laminated to studs with daubs of adhesive 12"o.c. drywall screws at third points along joints and ends. 3. 2" thick sound attenuation blanket.	...	Riverbank Acoustical Labs. TL66-253 1966 16f Celotex Corp.	51	1.3.3.1.5.10

Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies

Sound Transmission Loss of Exterior Doors and Windows

Door	*Weather Strip*	*Normally closed STC*
Wood, flush solid core(1)	Brass	**27**
Wood, flush solid core(1)	Plastic	**27**
Steel, flush(2)	Magnetic	**28**

Door Construction Detail

(1)Flush solid core wood door	Width	1-3/4"
	Weight	78lb, 3.9 lb/sq ft
(2)Flush steel door	Width	1-3/4"
	Faces	0.028" steel, separated by plastic perimeter strip
	Core	Rigid polyurethane, 2 2-1/2" lb/cu.ft, foamed in place
	Weight	64lb, 3.2 lb/sq ft

Sound Transmission Loss of Windows

Material	*Type*	*Size*	*Glazing*[1]	*Sealed STC*	*Locked STC*	*Unlocked STC*
Wood	Double hung	3'x5'	ss	**29**		**23**
			ss-d	**29**		
			ds	**29**		
			ds-d	**30**		
			In-7/16"	**28**	**26**	**22**
	Fixed picture	6'x5'	ss-d	**28**		
			ds	**29**		
			in-1"	**34**	**STC**	**STC**
Wood-plastic	Double hung		ss	**29**	**26**	**26**
			in-3/8"	**26**	**26**	**25**
	Storm sash		ds	**30**	**27**	
			in-3/8"	**28**	**24**	
	Fixed casement		ds	**31**		
	Operable casement		ds		**30**	**22**
	Sliding glass door		lam-3/16"	**31**	**26**	**26**
Aluminum	Sliding		ss	**28**	**24**	
	Operable casement		ds	**31**	**21**	**17**
	Single hung		in-7/16"	**30**	**27**	**25**
Single pane 1/4" laminated glass						**34**

[1]ss	=	single strength
ds	=	double strength
d	=	divided lights
in	=	insulating glass of indicated overall thickness
lam	=	laminated safety glass of indicated overall thickness

Taken from the U.S. Department of Commerce National Bureau of Standards Building Science Series 77.
* Information received in imperial units only