

Noise Impact Study

650 Victoria Terrace, Fergus, ON

25015451

Prepared For

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1.0 Introduction

At the request of 2566201 Ontario Inc. (Client), Thornton Tomasetti (TT) presents this Noise Impact Study (NIS) regarding the proposed townhouse residential development at 650 Victoria Terrace, Fergus, ON (the Project).

The purpose of this study is to assess the noise impacts on the Project from surrounding sources and the noise impact of the Project on surrounding noise sensitive areas. This report is intended to support the Zoning By-law Amendment (ZBA) and Official Plan Amendment (OPA) application for the Project.

Where applicable, this report will provide noise control recommendations to meet the requirements of the relevant Land Use Planning Authority (LUPA). LUPAs in the Township of Centre Wellington and the County of Wellington adopt the noise criteria developed by the Ontario Ministry of the Environment, Conservation and Parks (MECP).

2.0 Site and Surrounding Area

2.1 Planned Development

The proposed development includes ninety townhouse blocks and 1 commercial block. The overall Project area is approximately 12 Acres. The Project site plan is provided in Figure 1, included in Appendix A.

2.2 Project Location

The Project is located on the northeast corner of Victoria Terrace and Forfar Street East intersection in Fergus, Ontario. The existing lands are currently industrial.

The lands to the west, south and east are predominantly residential. Nexans Canada Inc. (Nexans) industrial facility is located across Gzowski Street to the northeast. Fergus Electricity Substation is located north of the proposed development.

The site is bounded by Victoria Terrace, Forfar Street East and Gzowski Street. Highway 6 is located approximately 440 m to the west. An illustration of the project location and surrounding area is provided in Figure 2 of Appendix A.

2.3 Zoning & Official Plan

The Project site is zoned as M1 “Industrial Zone” under the Township of Centre Wellington’s Comprehensive Zoning By-Law 2009-045 (Consolidated to May, 2025), and is designated as “Industrial” under the township of Centre Wellington’s Official Plan. Surrounding areas are predominantly zoned for residential uses to the west, south and east, with Industrial lands to the north

Based on the current development applications list provided by the township of Centre Wellington and the site visit completed on July 9, 2025, TT understands that no other significant developments or redevelopments are planned in the surrounding area that could potentially introduce new surrounding noise sources or receptors that might impact or be impacted by the development.

A zoning map is presented in Figure 3, included in Appendix A.

2.4 Site Inspection

TT personnel attended the Project site on July 9, 2025, in order to inspect the acoustical environment in the area of the Project.

Transportation noise at the Project site was observed to be intermittent by traffic noise from the nearby Victoria Terrace to the west, nearby Gzowski Street to the east, and nearby Forfar Street East to the south. Transportation noise from adjacent roadways is discussed in Section 4.0 of this report.

Audible noise from distant stationary sources located at Nexans was identified at the Project site; however, the measured sound levels at the closest property line was found to be 45 dBA, Leq-1hr. Information related to Nexans operations, as documented by their current Environmental Compliance Approval (ECA), was obtained via communications with Nexans. Additionally, the Fergus Electrical Substation to the north was investigated and the cooling fans were found to be an audible stationary noise source.. Stationary noise source analysis of Nexans and the electrical substation are discussed in Section 5.0 of this report.

3.0 Applicable Noise Guidelines

The MECP's *Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning* (NPC-300) provides province wide guidance regarding assessment standards and criteria for evaluating noise impacts from transportation sources such as roads, railways and aircraft; as well as stationary sources such as mechanical equipment, and industrial facilities. In preparing this report, TT has referred to *Part A Background* and *Part C Land Use Planning* of NPC-300.

This NIS report has been prepared to support land use planning decisions, and is not intended to support an application for an Environmental Compliance Approval (ECA) in accordance with *Part B Stationary Sources* of NPC-300, and Section 9 of the Environmental Protection Act.

In addition to adopting the MECP's recommended standards and criteria, some LUPAs impose additional requirements on applications for development approval. The LUPAs for this Project are the Township of Centre Wellington and the County of Wellington. These LUPAs generally defer to the MECP's guidelines as documented in NPC-300, as in the Development Manual by Centre Wellington, dated June 2024.

4.0 Transportation Noise Assessment

4.1 Critical Transportation Noise Receptors

NPC-300 defines a point of reception for the assessment of transportation noise sources as either the Plane of Window (POW) of a noise sensitive indoor space or an Outdoor Living Area (OLA) representing an area of a noise sensitive land use intended for quiet enjoyment of the outdoor environment.

The POW receptor(s) most likely to be affected by transportation noise are those representing the residential suites of the Project. Specifically, POW receptors were assessed for the following:

- Residential units on all facades of the townhouse units of the Project.

Based on the provided site plan of the Project, no qualified OLAs have been identified for the development. Elevated decks above the garages have a depth less than 4m.

4.2 Transportation Noise Sources

4.2.1 Road Noise Sources

Victoria Terrace, Forfar Street East and Gzowski Street are surrounding the Project site and are the most significant roadway noise sources for the Project. Highway 6 (approximately 440m to the west) and other roadways in the area are distant and shielded by intervening existing buildings.

Traffic impact study for the Project was completed by Paradigm. Traffic Movement Counts (TMCs), peak hour counts, vehicle type breakdown percentiles and speed limits were provided by Paradigm. The Annual Average Daily Traffic (AADT) volumes are estimated as 10 times the PM peak hour counts. The volume split for the daytime/night-time periods was assumed to be the typical 90/10 split.

The medium and heavy truck distribution was applied based on a default 5:15 ratio of medium:heavy trucks. Buses were conservatively assumed as medium trucks. The annual growth rate of 2%, provided by Paradigm, was further used to forecast future traffic volumes for a 2040 future-horizon year.

The future traffic data applied in the assessment is summarized in Table 1 with the raw traffic data provided in Appendix B.

Table 1: 2040 Future Road Traffic Data Summary

Street	AADT	%Medium Trucks	%Heavy Trucks	Day/Night	Speed Limit
Victoria Terrace	6,104	0.8%	0.6%	90/10	40 km/h
Forfar Street East	2,782	1.7%	1.5%	90/10	40 km/h
Gzowski Street	3,671	1.8%	0.8%	90/10	40 km/h

4.2.2 Rail Noise Sources

Railways are not located within 1000 m of Project lands, and are not a concern for the development regarding noise and vibration. Therefore, an assessment of railway impacts is not considered necessary.

4.2.3 Aircraft Noise Sources

No airports have been identified in the vicinity of the Project.

4.3 Transportation Sound Level Limits

4.3.1 Indoor Living Areas

Impacts to POWs from combined road and rail (if applicable) traffic are assessed against a 16-hour daytime (07:00 – 23:00) and 8-hour nighttime (23:00 – 07:00) equivalent sound pressure level (L_{eq}) reported in dBA. The combined impact is used to determine the requirement for ventilation and warning clauses. The MECP POW sound level limits and the sliding scale of required noise reduction measures for combined road and rail (if applicable) noise at POWs are listed in Table 2. Note that whistle noise is not included in the assessment of rail noise for this purpose.

Table 2: MECP POW Sound Level Limit: Ventilation & Warning Clauses – Combined Road & Rail Traffic

Category	Daytime $L_{eq,16hr}$ (dBA)	Nighttime $L_{eq,8hr}$ (dBA)	Mitigation Measures	NPC-300 Warning Clause Required
POW Limit	55	50	None	None
POW Mitigation Threshold Living & Bedrooms	56 - 65	51 – 60	Include forced air heating and provision for central air conditioning	Type C
POW Mitigation Threshold Living & Bedrooms	>65	>60	Include central air conditioning	Type D

Impacts to indoor noise levels from road and rail (if applicable) traffic are assessed against a 16-hour daytime (07:00 – 23:00) and 8-hour nighttime (23:00 – 07:00) equivalent sound pressure level (L_{eq}) reported in dBA at the POW receptor. The requirements for building construction to address transportation noise impacts to indoor sound levels are determined independently for road and rail noise, with the resulting requirements then being combined logarithmically. The MECP indoor sound level limits and the required noise reduction measures for road and rail noise at POWs are listed in Table 3. Note that whistle noise is included in the assessment of rail noise for this purpose.

Table 3: MECP Indoor Sound Level Limit & Construction Requirements – Road & Rail Traffic

Category	Daytime $L_{eq,16hr}$ (dBA)	Nighttime $L_{eq,8hr}$ (dBA)	Total $L_{eq,24hr}$ (dBA)	Mitigation Measures
Road Indoor Limit Living Rooms / Bedrooms	45 / 45	45 / 40	-	Not Applicable
Road POW Mitigation Threshold Living & Bedrooms	>65	>60	-	Design building components to achieve indoor sound level limit
Rail Indoor Limit Living Rooms / Bedrooms	40 / 40	40 / 35	-	Not Applicable
Rail POW Mitigation Threshold Living & Bedrooms	>60	>55	-	Design building components to achieve indoor sound level limit
Rail POW Sound Level Bedrooms	-	-	>60	Minimum of brick veneer or masonry equivalent construction from foundation to rafters in first row of dwellings if within 100m of tracks

4.4 Transportation Sound Level Predictions

Road traffic noise modelling was calculated using the ORNAMENT algorithms (the MECP road traffic noise model) within the Cadna/A noise propagation software, using line sources and sound emission. A validation file comparing the Cadna/A and MECP STAMSON 5.04 road traffic noise model is shown in Appendix C. Reflective intermediary ground was conservatively assumed given the close setback distances to the surrounding roadways.

Noise impacts on the Project were assessed using the “building evaluation” feature in CadnaA, allowing for predicted noise levels along each façade of the development.

A summary of the worst-case calculated sound levels for the various facades of each building are presented in Table 4 and shown in Figure 4a/b for the daytime and night-time periods, respectively.

Table 4: Worst-case Façade Sound Levels due to Road Sources

Facade	Predicted Transportation Sound Levels (dBA)	
	Daytime (07:00–23:00) $L_{eq,16hr}$	Nighttime (23:00–07:00) $L_{eq,8hr}$
Townhouse Blocks facing Victoria Terrace	58	52
Townhouse Blocks facing Forfar Street East <i>(with exception of the corner unit at Victoria Terrace, included in the above category)</i>	53	46
Townhouse Blocks facing Gzowski Street	56	50
Townhouse Blocks facing towards Bellamy Crescent	53	47

As the predicted sound levels for the units facing Victoria Terrace exceed 55 dBA during the daytime and 50 dBA during the nighttime, an assessment of mitigation measures is considered necessary. Details on the transportation noise control measures are provided in the next section.

4.5 Transportation Noise Control Recommendations

Noise control recommendations for the proposed development are summarized in Table 5 and discussed in the subsequent sections.

Table 5: Transportation Noise Control Measures Summary

Unit	Barrier	Building Components	Ventilation	Warning Clause
Townhouse Block A Units (facing Gzowski)	N/A		Provision for Adding Central Air Conditioning	Type C
Street)Townhouse Blocks H Units (facing Victoria Terrace)	N/A	Meet OBC Requirements	Provision for Adding Central Air Conditioning	Type C
Rest of the Units	N/A		N/A	N/A

4.5.1 Indoor Living Areas - Ventilation

The townhouse units facing Gzowskly Street and Victoria Terrace (Blocks A and H) are predicted to be between 55 dBA and 65 dBA during the 16-hour day (07:00 – 23:00), and 50 dBA and 60 dBA during the 8-hour night (23:00 – 07:00) due to road noise. Therefore, the units should be designed with a provision for the installation of central air conditioning in the future, at the occupant’s discretion. Warning clause Type C is also required as detailed in the next section.

4.5.2 Warning Clauses

The following examples of warning clause wordings are based on applicable guidance documents and TT's experience regarding common requests from stakeholders. Precise wordings may be modified by the Client with input from the relevant LUPA(s), stakeholders, and/or legal counsel, if required.

The **Type C** warning clause is required to be included in the development agreements for units facing Gzowalski Street and Victoria Terrace (Blocks A and H). The Type C warning clause is as follows:

"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, Conservation and Parks."

Warning clauses are to be included in all agreements of Offers of Purchase and Sale, lease/rental agreements and condominium declarations.

5.0 Surrounding Stationary Noise Sources

5.1 Critical Stationary Noise Receptors

NPC-300 defines a point of reception for the assessment of stationary noise sources as any location on a noise sensitive land use where noise from a stationary source is received. This typically includes both points of reception on building façades, representing the plane-of-window of noise sensitive spaces (POR) and outdoor points of reception representing areas such as balconies, gardens, patios, and terraces (OPOR). These locations may be the same or different from the POW and OLA receptors identified as part of a transportation noise assessment.

The project point of reception (PPOR) were applied consistent with the roadway noise assessment. The noise sensitive PPOR includes all facades of the Project, which are expected to include operable (openable) windows. Similar to the transportation noise assessment, no qualified OPORs have been identified as a part of the project .

5.2 Stationary Noise Sources

NPC-300 defines a stationary source of noise as one or more sources of sound that are normally operated within a given property. Stationary sources typically include mechanical equipment such as Heating, Ventilation and Air Conditioning (HVAC) equipment, standby power generators with routine testing, and heavy vehicle traffic (truck idling, driving, and loading).

Certain sources of noise, such as residential air conditioners, passenger automobile traffic in parking lots, or temporary noise such as that related to construction are not considered to be stationary sources in NPC-300 and are not assessed in this report.

Based on the land use compatibility study and industries D-6 review completed by TT under a separate cover, two main facilities have been identified that require a detailed stationary noise assessment: Fergus Electricity Substation and Nexans. Fergus Electricity Substation main identified noise sources

were the cooling fans associated with the transformer during the site visit (refer to Section 2.4). The details regarding Nexans sources and their operational scenarios were obtained upon communications with Nexans based on their current ECA.

Two future sources for Nexans have been included: substation to provide electricity to the west building and inverter anticipated to be a part of a future solar farm. The sound levels for future sources were based on proxy data available on-file at TT. As information was not available from Nexans, the substation and solar farm are anticipated to be at a conceptual stage, and not sufficiently progressed to confirm inclusion in future plans. Regardless, the potential future Nexans sources were included to confirm that the future plans can meet the NPC-300 guideline limits at the surrounding existing homes and the Project with the appropriate selection and placement of equipment.

Table 6 and Figure 5 provide a summary of the surrounding stationary source data.

Table 6: Surrounding Stationary Noise Sources

Source Description	Sound Power (dBA)	Source Type	Notes & Assumptions
<u>Nexans:</u>			
General Exhaust (IDs: 1A to 8A & 1B to 8B)	86	Steady	
Aluminum Drawing Line (ID: F5)	69	Steady	
Cooling Tower (ID: CT1)	90	Steady	
Intake (ID: IN1 to IN8)	68	Steady	
Dust Collector (ID: DC1)	80	Steady	
Pelletizer Exhaust (ID: EX102)	100	Steady	
Dust Collector (ID: DC3a)	98	Steady	
Dust Collector (ID: DC3b)	95	Steady	
Box vent (ID: BV) Ink Mixing Exhaust (ID: I3)	90	Steady	
General Exhaust (ID: EX116)	68	Steady	
Cafeteria Exhaust (ID: A1)	78	Steady	
Make-Up Air Unit (ID: MAU1 & MAU2)	89	Steady	
General Exhaust (ID: EX 118 to EX121)	75	Steady	
Silo Filling (ID: SF)	108	Steady, Tonal	- Based on ECA data - No operations at night
Dust Collector (ID: DC2)	98	Steady	
Silo Transfer (ID: SPT)	92	Steady	- Based on ECA data - 30 min/hr throughout the day
Truck Idle (ID: TI1 & TI2)	101	Steady	- Based on ECA data - Day Only, 5 min/hr
Truck Movement (ID: HRT1)	106	Steady	- Based on ECA data - Day Only, 30 min/hr

Source Description	Sound Power (dBA)	Source Type	Notes & Assumptions
Future Substation at Nexans	85	Steady	- Based on historical measurement - 30 min/hr duty cycle at night
Future Inverter at Nexans	99	Steady	- Based on proxy data - No operation during night
Fergus Electricity Substation:			
Cooling Fans	85	Steady	- Based on onsite measurement - 30 min/hr duty cycle at night

5.3 Applicable Guideline Limits

NPC-300 defines a Class 2 area as having an acoustical environment typical of a major population centre during the day, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum". However, during the nighttime, the background sound level becomes low and defined by natural environment. For this assessment, the Project lands and surroundings are considered to be representative of a Class 2 area, which is consistent with the area classification applied in the Nexans ECA documentation.

The applicable guideline limits are the higher of the NPC-300 exclusionary limits or the existing ambient sound environment from roadway noise. Ambient background sound levels were not investigated as a part of this assessment. Thus, Class 2 exclusionary sound level limits for steady noise sources have been adopted in the current assessment and are further provided in Table 7. Steady stationary noise sources are assessed against a 1 hour equivalent sound pressure level (L_{eq}) expressed in A-weighted decibels (dBA). Routine testing of emergency equipment, if applicable, is assessed separately from other stationary noise sources, and is compared to sound level limits that are 5 dBA higher than would otherwise apply.

Table 7: Applied Sound Level Limits – Steady Noise

Time Period	Exclusionary Guideline Limits ($L_{eq,1hr}$, dBA) Façade POR
Daytime (07:00 – 19:00)	50
Evening (19:00 – 23:00)	50
Nighttime (23:00 – 07:00)	45

Notes: [1] An assessment of ambient sound levels was not completed.

[2] No OPORs have been identified as a part of the project.

5.4 Stationary Sound Level Predictions

Sound levels at the PORs due to the nearby stationary sources were calculated using the software CadnaA in accordance with the methods described in ISO 9613-2, with the following noted:

- Global ground absorption coefficient of 0.75 was applied in the noise modelling to account for the mostly soft intervening ground between the stationary sources and the Project. A localized hard ground was modelled at the Fergus Electricity Substation.
- One order of reflection was included to account for the effect of surrounding buildings.
- The existing Nexans facility operations were assessed based on information provided in the Nexans AAR. The Cadna/A model results were first compared to the sound levels reported in the supporting documents for Nexans ECA. The current model is found to be conservative by up to 2 dB at the two points of reception closest to the Project, prior to applying in the assessment.

Noise impacts were assessed on the development using the “building evaluation” feature in CadnaA, as outlined in the Transportation assessment.

As a conservative assessment of surrounding stationary noise impacts, all sources were combined. This includes the Nexans Facility, future Nexans equipment (substation and solar farm inverter), and the Fergus substation.

The sound levels for the all surrounding stationary noise sources were predicted on the Project with worst-case impacts summarized in Table 8 below and compared with the applicable sound limits. Additionally, a summary of the predicted sound levels for the townhouse blocks are shown in Figure 6a/b for the daytime/evening and night-time periods, respectively. A sample modelling output file for stationary noise source modelling of Nexans on a worst-case façade receptor is included in Appendix D.

Table 8: Worst-case Predicted Stationary Noise Source Impacts

Location	Time Period	Steady Sound Level $L_{eq,1hr}$ (dBA)	Steady Sound Level Limit $L_{eq,1hr}$ (dBA)	Compliance
Worst-Case Townhouse Block facing Nexans	Daytime/Evening	49	50	Yes
	Nighttime	45	45	Yes

The sound levels attributable from the surrounding stationary noise sources are predicted to meet the applicable Class 2 sound limits at the Project. No additional noise controls are considered necessary for the surrounding stationary noise sources.

5.5 Stationary Noise Mitigation Recommendations

No predicted excesses of the applicable stationary sound level limits at the Project receptors have been identified; therefore, no specific mitigation is recommended at this time. However, a warning clause **Type E** is recommended to notify the future tenants of nearby industrial facilities. The Type E warning clause is as follows:

“Purchasers/tenants are advised that due to the proximity of the adjacent Nexans Canada Inc. facility, noise from the facility may at times be audible.”

Warning clauses are to be included in all agreements of Offers of Purchase and Sale, lease/rental agreements and condominium declarations.

6.0 Development Mechanical Equipment Stationary Noise

The Project mechanical system design has not been significantly developed. However, stationary sources for the Project are anticipated to include residential AC units and rooftop HVAC equipment for the commercial building.

Air Conditioning Units should be selected to meet the requirements of NPC-216 – Residential Air Conditioning Devices. With the appropriate selection and placement of the residential AC units, the applicable guideline limits are expected to be met on both on-site and off-site locations.

Development mechanical systems for the commercial building are expected to include rooftop HVAC units. With the appropriate selection of equipment, locating equipment to minimize noise impacts, and including noise controls in the design (barriers, low noise units), the applicable guideline limits can be met. Once sufficient information is available, an assessment of stationary noise impacts from the development mechanical systems should be completed to confirm the applicable guideline limits are met.

7.0 Concluding Comments

Transportation noise impacts associated with the Project are anticipated to meet all applicable MECP noise limits with a provision for the installation of central air conditioning in the future and the warning clause as presented in Section 4.5 of this report, for the units facing Victoria Terrace.

No additional noise control measures are considered necessary for addressing surrounding stationary noise sources. However, the warning clause, as presented in Section 5.5 of this report, is recommended to notify the future occupants of nearby industrial facilities.

Stationary noise sources associated with the development are anticipated to include residential AC units and rooftop HVAC units for the commercial building. With the appropriate selection and placement of the units, the applicable guideline limits are expected to be met on both on-site and off-site locations.

Therefore, the proposed development is considered to be feasible regarding noise. Please, do not hesitate to contact us if there are any questions.

Yours Truly,

Thornton Tomasetti

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Senior Project Engineer



Reviewed by:
2025/08/15
Marcus Li, P.Eng.
Vice President

Disclaimer

This report is provided in accordance with the contractual agreement between TT and the Client. In addition to our contractual obligations TT notes the following general disclaimers and qualifications regarding the content of this report.

In preparing this report, TT has relied upon the accuracy and completeness of information provided by the Client and other third parties (manufacturers, other consultants, etc.) and accepts no responsibility for errors or omissions by other parties in the information provided to TT.

This report has been prepared solely for the benefit of the Client and the content of this report is intended for informational purposes only. This report shall not be relied upon by any other parties, including but not limited to other consultants retained by the Client, or utilized for any other purposes.

Ultimate responsibility for the design and construction remains solely with the architect/engineer of record and/or the contractor(s). Achieving the required mitigation requirements relies on correct incorporation of mitigation recommendations into Architectural and Mechanical drawings and specifications, as well as correct installation during construction. It is recommended that the implementation of mitigation measures be reviewed by a qualified acoustical consultant.

On request, TT will provide a proposal for additional work such as to peer review noise control measures or observe on-site conditions as appropriate; however, notwithstanding the foregoing, it is expressly understood and agreed that TT shall not have control or charge of, and shall not be responsible for the acts or omissions, including but not limited to means, methods, techniques, sequences and procedures, of the Design Professionals and/or Contractors performing design and/or construction on the Project. Accordingly, TT shall not be held responsible for the failure of any party to properly incorporate the mitigation measures stated in this report.

Appendix A: Figures

- Figure 1: Project Site Plan
- Figure 2: Project Location and Surroundings
- Figure 3: Zoning Map
- Figure 4: Projected Façade Levels – Roadway
- Figure 5: Locations of Stationary Noise Sources at Nexans
- Figure 6: Projected Façade Levels - Nexans

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Client Name
2566201 Ontario Inc.

Project Name
650 Victoria Terrace

Notes:

- 1) Not to Scale

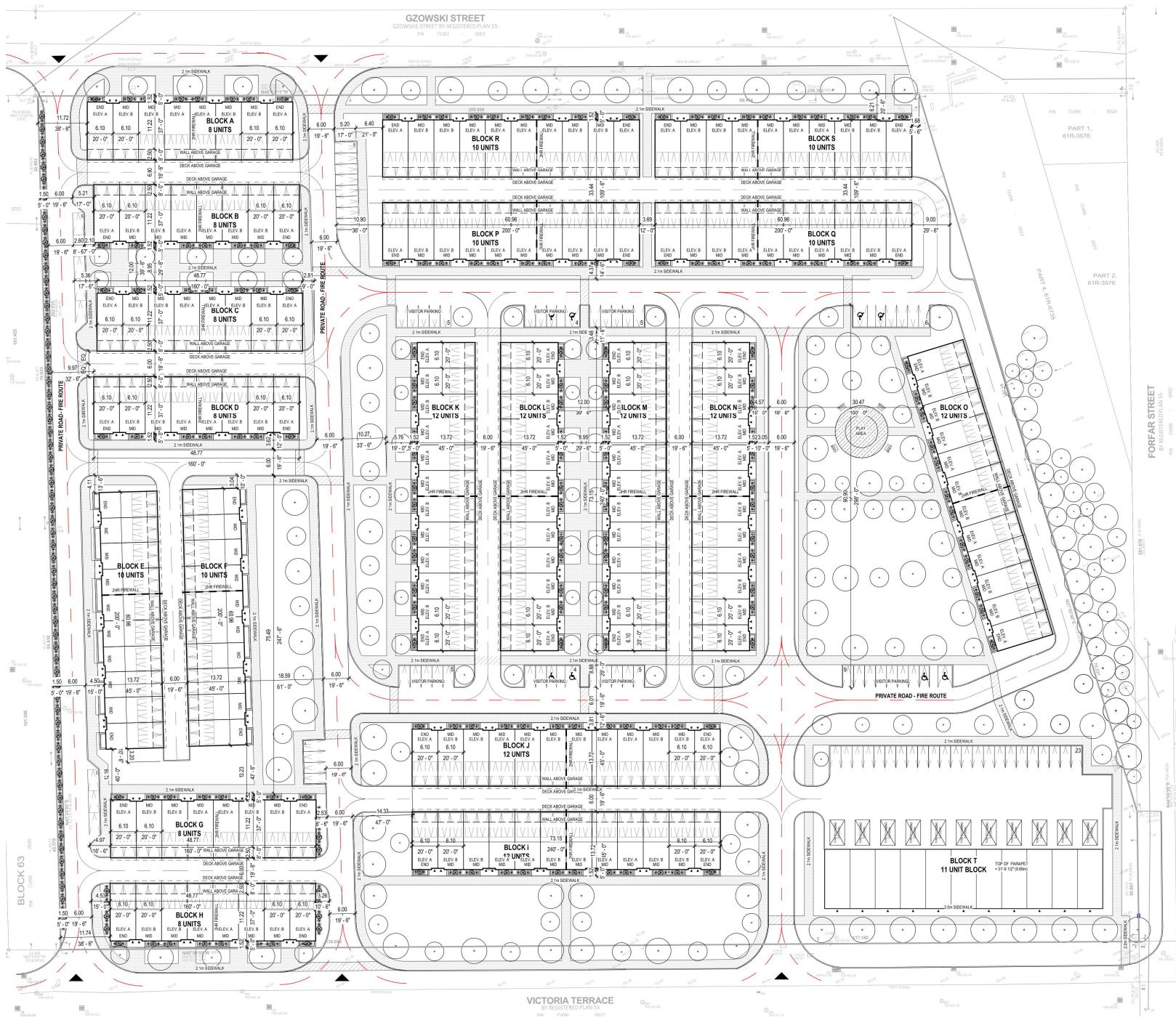
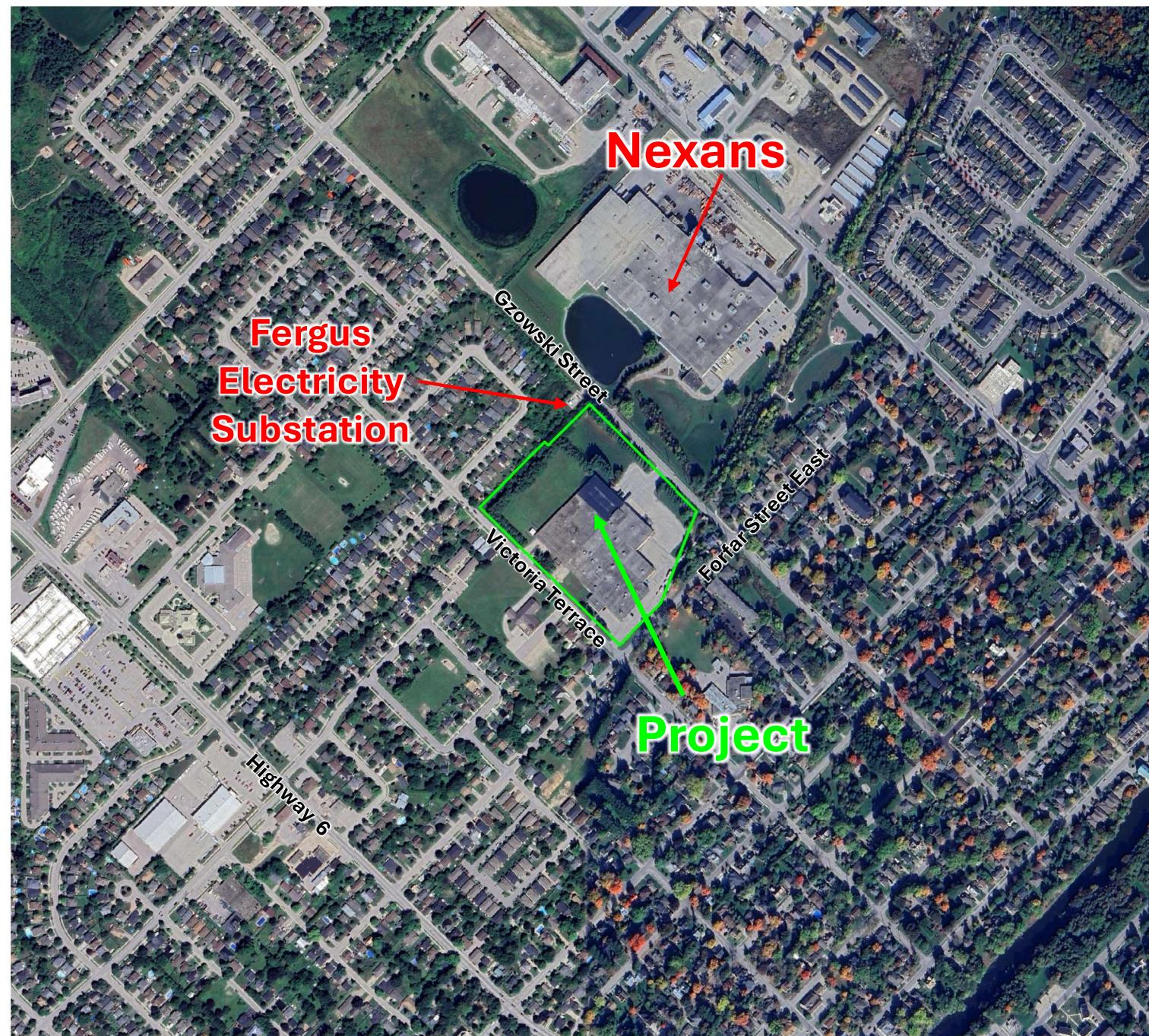


Figure Title
Project Site Plan

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AFS

TT Project #
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Date
Aug 15, 2025

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Client Name
2566201 Ontario Inc.

Project Name
650 Victoria Terrace

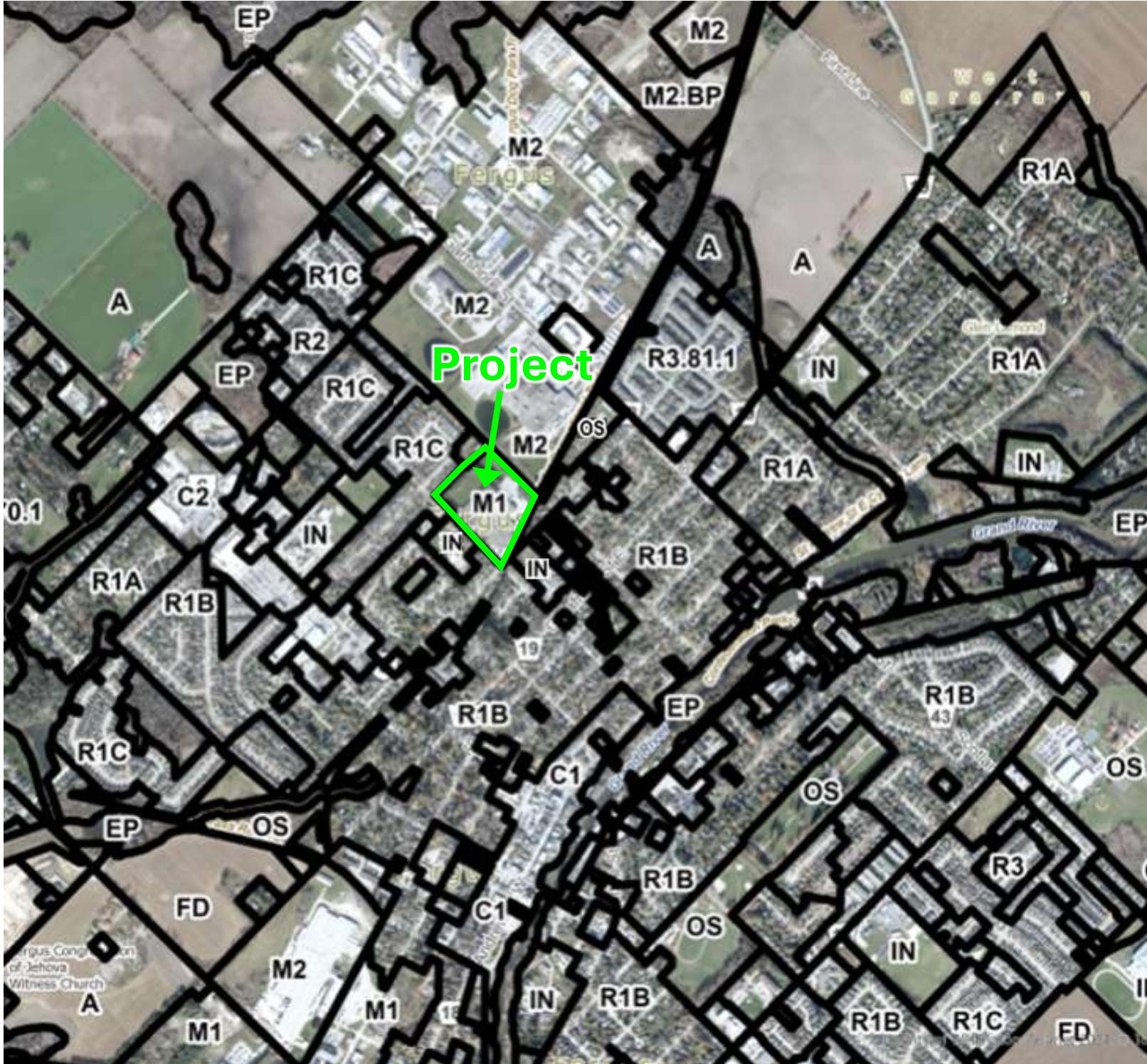
Notes:

Figure Title
Project Location and
Surroundings

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Date
Aug 8, 2025



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Client Name
2566201 Ontario Inc.

Project Name
650 Victoria Terrace

Notes:
Zone Categories:

- R: Residential
- M: Industrial
- EP: Environmental Protection
- IN: Institutional
- OS: Open Space
- A: Agricultural
- FD: Future Development

<https://centrewellington.maps.arcgis.com/apps/webappviewer/index.html?id=90e3f5bfd61d4fb3899ee669f4378f33>

Figure Title
Zoning Map

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3

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Project Name
650 Victoria Terrace

Notes:

Sound Pressure Levels

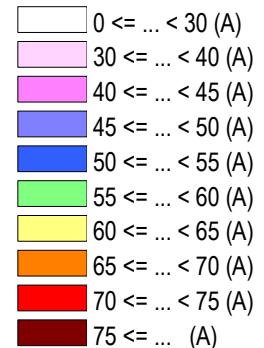


Figure Title
Predicted Façade Levels –
Roadway, Daytime

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4a



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Notes:

Sound Pressure Levels

0 <= ... < 30 (A)
30 <= ... < 40 (A)
40 <= ... < 45 (A)
45 <= ... < 50 (A)
50 <= ... < 55 (A)
55 <= ... < 60 (A)
60 <= ... < 65 (A)
65 <= ... < 70 (A)
70 <= ... < 75 (A)
75 <= ... (A)

Figure Title
Predicted Façade Levels –
Roadway, Nighttime

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Project Name
650 Victoria Terrace

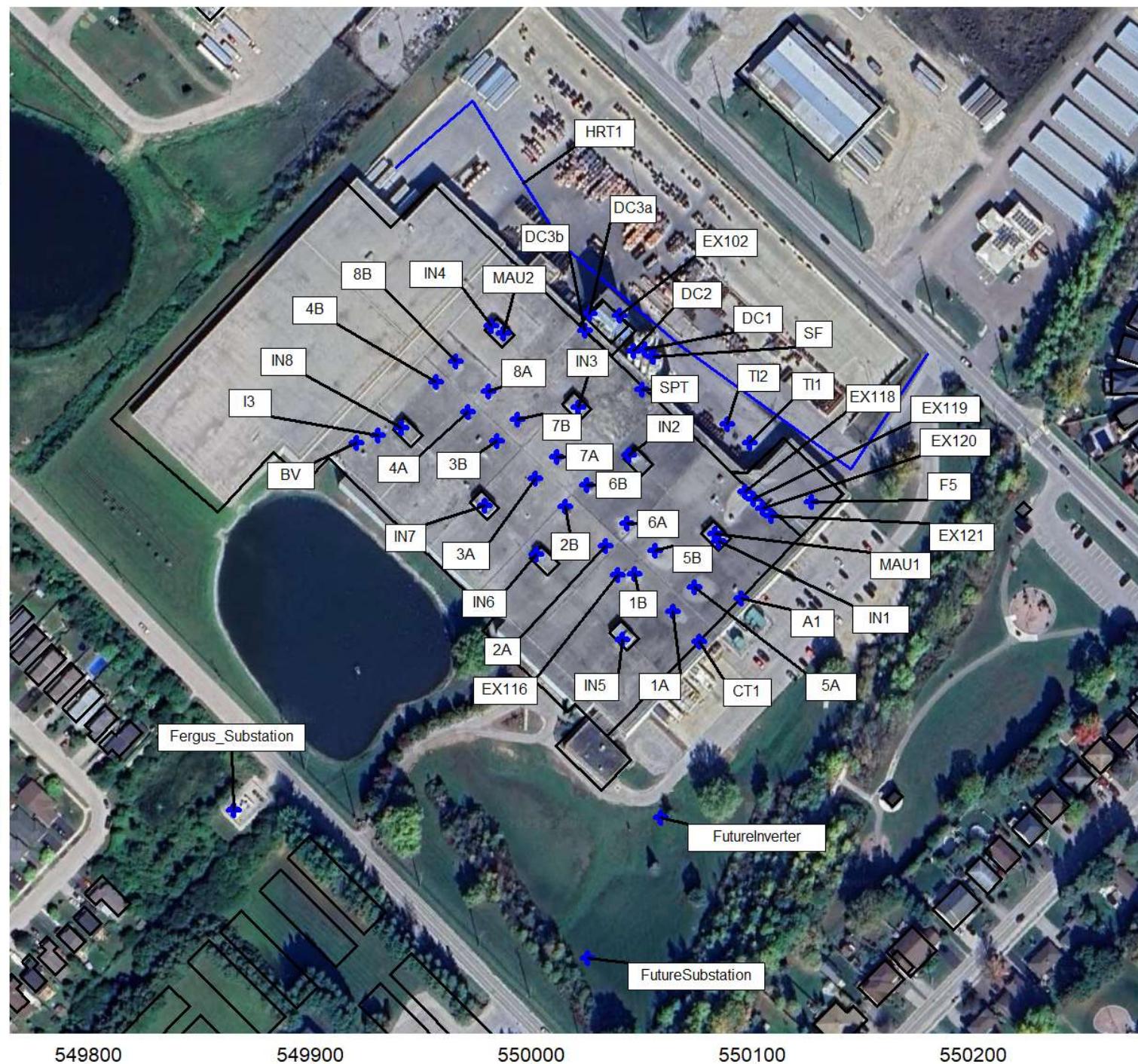
Notes:

Figure Title
Locations of Stationary
Noise Sources

Produced By
AFS

TT Project #
25015451

Date
Aug 8, 2025



Thornton Tomasetti

Client Name
2566201 Ontario Inc.

Project Name
650 Victoria Terrace

Notes:

Sound Pressure Levels

0 <= ... < 30 (A)
30 <= ... < 40 (A)
40 <= ... < 45 (A)
45 <= ... < 50 (A)
50 <= ... < 55 (A)
55 <= ... < 60 (A)
60 <= ... < 65 (A)
65 <= ... < 70 (A)
70 <= ... < 75 (A)
75 <= ... (A)

Figure Title
Predicted Façade Levels –
Stationary, Daytime

Produced By
AFS

TT Project #
25015451

Date
Aug 15, 2025

6a



Thornton Tomasetti

Client Name
2566201 Ontario Inc.

Project Name
650 Victoria Terrace

Notes:

Sound Pressure Levels

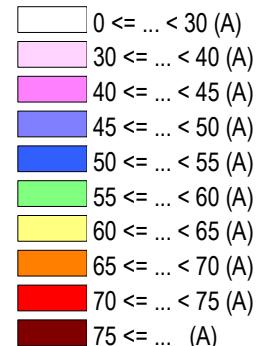


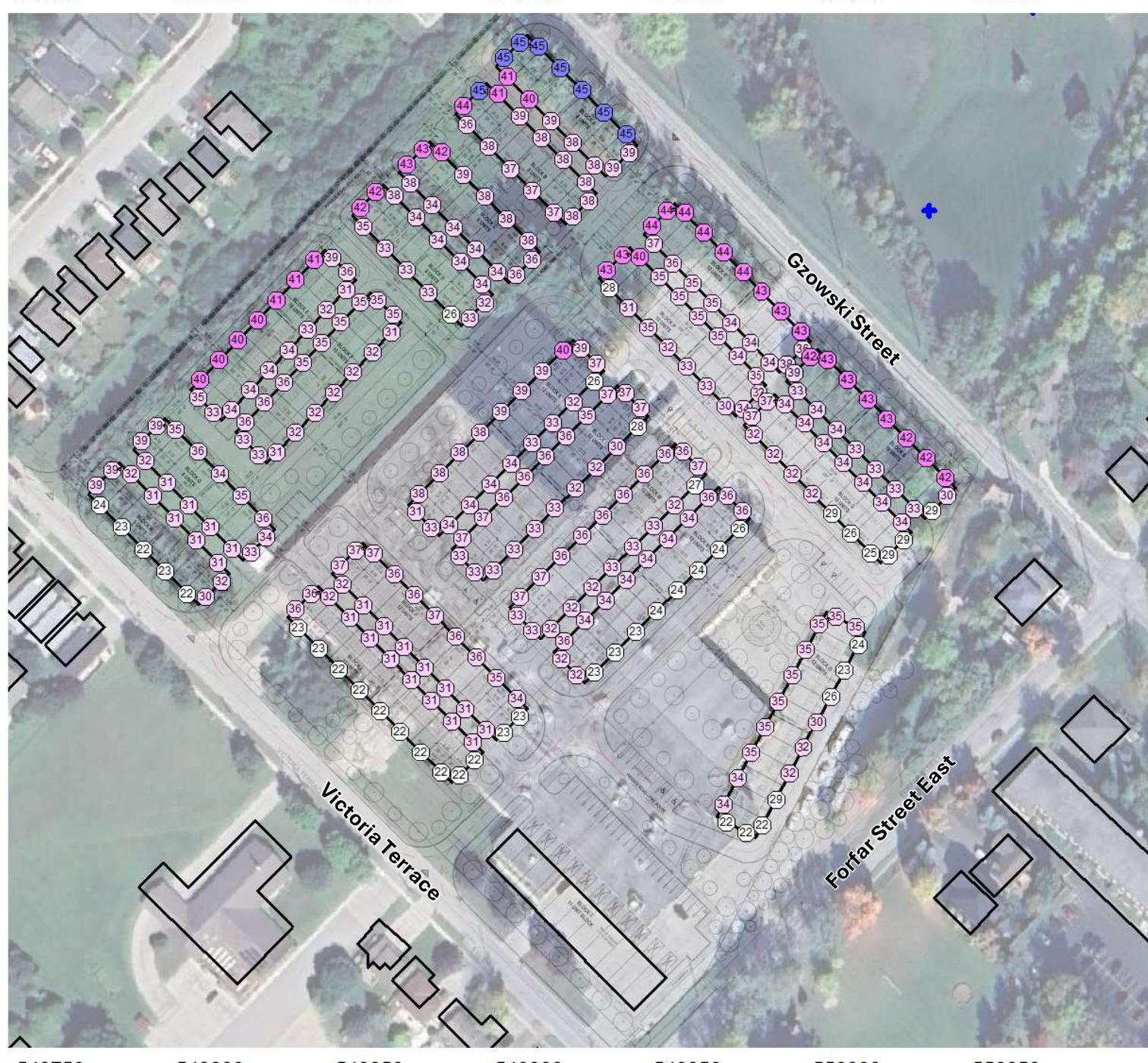
Figure Title
Predicted Façade Levels –
Stationary, Nighttime

Produced By
AFS

TT Project #
25015451

Date
Aug 15, 2025

6b



Appendix B: Traffic Data

Without the Development (2034 Horizon Year – Five years after the full build-out):

Roadway	Segment	AM Peak Hour Volume	PM Peak Hour Volume
Forfar Street East	West of Victoria Terrace	110	93
Forfar Street East	Victoria Terrace to Gzowski Street	157	182
Forfar Street East	Gzowski Street to Gartshore Street	232	237
Gzowski Street	South of Forfar Street East	170	206
Gzowski Street	North of Forfar Street East	258	281
Victoria Terrace	South of Forfar Street East	295	357
Victoria Terrace	Forfar Street East to Parkside Drive East	398	484
Victoria Terrace	Parkside Drive East to Strathallan Street	296	321

With the Development (2034 Horizon Year – Five years after the full build-out):

Roadway	Segment	AM Peak Hour Volume	PM Peak Hour Volume
Forfar Street East	West of Victoria Terrace	129	109
Forfar Street East	Victoria Terrace to Gzowski Street	182	209
Forfar Street East	Gzowski Street to Gartshore Street	239	247
Gzowski Street	South of Forfar Street East	195	232
Gzowski Street	North of Forfar Street East	299	326
Victoria Terrace	South of Forfar Street East	337	408
Victoria Terrace	Forfar Street East to Parkside Drive East	449	542
Victoria Terrace	Parkside Drive East to Strathallan Street	299	325



Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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519-896-3163 cbowness@ptsl.com

Count Name: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025
Page No: 1

Turning Movement Data

Start Time	Forfar Street Eastbound						Forfar Street Westbound						Victoria Terrace Northbound						Victoria Terrace Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	4	0	0	0	0	4	2	1	2	0	0	5	0	11	0	0	1	11	3	13	0	0	0	16	36
7:15 AM	3	5	0	0	1	8	1	0	7	0	0	8	0	12	1	0	0	13	4	21	0	1	0	26	55
7:30 AM	6	3	0	0	2	9	3	2	3	0	0	8	0	10	3	0	0	13	3	22	0	0	0	25	55
7:45 AM	4	6	0	0	0	10	0	2	7	0	1	9	0	12	1	0	0	13	6	23	3	0	0	32	64
Hourly Total	17	14	0	0	3	31	6	5	19	0	1	30	0	45	5	0	1	50	16	79	3	1	0	99	210
8:00 AM	4	4	2	0	7	10	3	5	5	0	0	13	0	18	0	0	2	18	4	24	4	0	1	32	73
8:15 AM	4	8	0	0	23	12	3	0	4	0	0	7	1	26	2	0	20	29	12	23	2	0	2	37	85
8:30 AM	13	5	0	0	33	18	1	2	14	0	0	17	5	31	15	0	35	51	6	22	6	0	0	34	120
8:45 AM	11	2	0	0	9	13	0	5	10	0	0	15	0	27	7	0	8	34	4	37	10	0	1	51	113
Hourly Total	32	19	2	0	72	53	7	12	33	0	0	52	6	102	24	0	65	132	26	106	22	0	4	154	391
9:00 AM	3	5	0	0	2	8	1	0	10	0	0	11	0	18	0	0	0	18	6	28	0	0	0	34	71
9:15 AM	5	0	1	0	2	6	0	2	2	0	0	4	0	10	0	0	0	10	7	22	4	0	0	33	53
9:30 AM	1	1	0	0	1	2	0	2	8	0	0	10	0	24	2	0	0	26	2	18	3	0	0	23	61
9:45 AM	1	0	0	0	0	1	0	2	2	0	0	4	0	18	0	0	0	18	3	11	4	0	0	18	41
Hourly Total	10	6	1	0	5	17	1	6	22	0	0	29	0	70	2	0	0	72	18	79	11	0	0	108	226
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11:30 AM	6	1	0	0	1	7	3	1	2	0	0	6	1	21	0	0	0	22	3	18	3	0	0	24	59
11:45 AM	4	1	0	0	0	5	2	2	3	0	1	7	0	23	1	0	1	24	8	22	4	0	0	34	70
Hourly Total	10	2	0	0	1	12	5	3	5	0	1	13	1	44	1	0	1	46	11	40	7	0	0	58	129
12:00 PM	7	3	1	0	2	11	2	6	4	0	0	12	0	27	1	0	0	28	7	31	4	1	0	43	94
12:15 PM	4	2	1	0	1	7	3	2	6	0	0	11	0	29	2	0	0	31	2	23	6	0	0	31	80
12:30 PM	8	2	0	0	2	10	2	7	6	0	0	15	0	22	2	0	1	24	6	29	4	0	0	39	88
12:45 PM	6	3	0	0	2	9	2	5	3	0	0	10	0	24	0	0	1	24	5	26	3	0	0	34	77
Hourly Total	25	10	2	0	7	37	9	20	19	0	0	48	0	102	5	0	2	107	20	109	17	1	0	147	339
1:00 PM	8	4	0	0	0	12	0	2	7	0	0	9	0	23	0	0	1	23	6	33	2	0	0	41	85
1:15 PM	10	5	0	0	0	15	1	1	3	0	0	5	0	19	2	0	0	21	8	27	2	0	0	37	78
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Hourly Total	18	9	0	0	0	27	1	3	10	0	0	14	0	42	2	0	1	44	14	60	4	0	0	78	163
3:00 PM	10	1	1	0	17	12	3	8	9	0	2	20	2	18	3	0	19	23	8	24	6	0	1	38	93
3:15 PM	17	3	1	0	43	21	2	7	9	0	0	18	4	32	18	0	57	54	13	35	9	0	1	57	150
3:30 PM	10	8	0	0	11	18	2	4	7	0	0	13	1	25	4	0	5	30	7	22	7	0	0	36	97
3:45 PM	2	3	1	0	2	6	3	4	8	0	0	15	1	33	3	0	0	37	8	24	2	0	1	34	92
Hourly Total	39	15	3	0	73	57	10	23	33	0	2	66	8	108	28	0	81	144	36	105	24	0	3	165	432
4:00 PM	5	5	0	0	0	10	0	3	12	0	0	15	0	40	0	0	3	40	7	29	3	0	0	39	104
4:15 PM	3	2	0	0	0	5	3	5	7	0	0	15	0	39	3	0	0	42	7	29	3	0	0	39	101

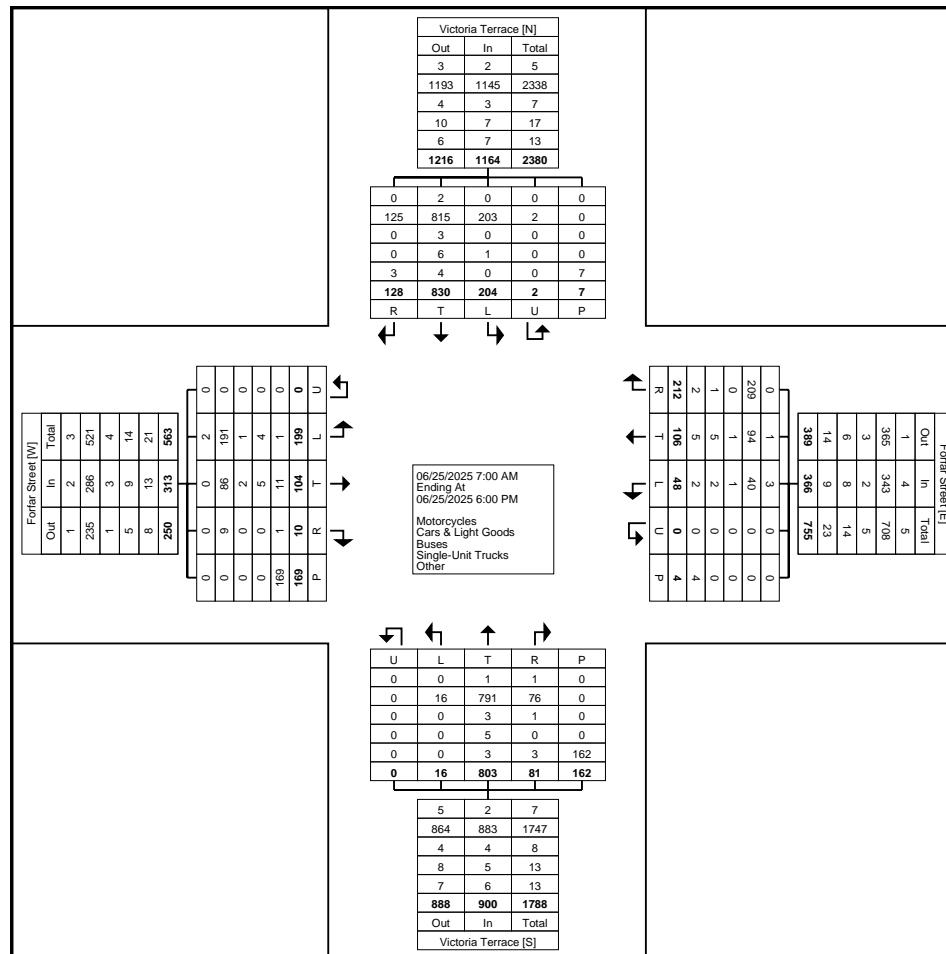
4:30 PM	7	6	0	0	6	13	1	2	10	0	0	13	0	35	2	0	6	37	13	40	2	0	0	55	118
4:45 PM	10	9	0	0	1	19	1	7	9	0	0	17	0	40	1	0	1	41	13	36	6	0	0	55	132
Hourly Total	25	22	0	0	7	47	5	17	38	0	0	60	0	154	6	0	10	160	40	134	14	0	0	188	455
5:00 PM	5	2	0	0	0	7	0	3	6	0	0	9	0	46	3	0	0	49	4	25	1	0	0	30	95
5:15 PM	6	1	1	0	0	8	0	5	8	0	0	13	1	33	2	0	0	36	10	32	10	0	0	52	109
5:30 PM	6	2	0	0	1	8	3	5	14	0	0	22	0	29	2	0	1	31	4	31	12	0	0	47	108
5:45 PM	6	2	1	0	0	9	1	4	5	0	0	10	0	28	1	0	0	29	5	30	3	0	0	38	86
Hourly Total	23	7	2	0	1	32	4	17	33	0	0	54	1	136	8	0	1	145	23	118	26	0	0	167	398
Grand Total	199	104	10	0	169	313	48	106	212	0	4	366	16	803	81	0	162	900	204	830	128	2	7	1164	2743
Approach %	63.6	33.2	3.2	0.0	-	-	13.1	29.0	57.9	0.0	-	-	1.8	89.2	9.0	0.0	-	-	17.5	71.3	11.0	0.2	-	-	-
Total %	7.3	3.8	0.4	0.0	-	11.4	1.7	3.9	7.7	0.0	-	13.3	0.6	29.3	3.0	0.0	-	32.8	7.4	30.3	4.7	0.1	-	42.4	-
Motorcycles	2	0	0	0	-	2	3	1	0	0	-	4	0	1	1	0	-	2	0	2	0	0	-	2	10
% Motorcycles	1.0	0.0	0.0	-	-	0.6	6.3	0.9	0.0	-	-	1.1	0.0	0.1	1.2	-	-	0.2	0.0	0.2	0.0	0.0	-	0.2	0.4
Cars & Light Goods	191	86	9	0	-	286	40	94	209	0	-	343	16	791	76	0	-	883	203	815	125	2	-	1145	2657
% Cars & Light Goods	96.0	82.7	90.0	-	-	91.4	83.3	88.7	98.6	-	-	93.7	100.0	98.5	93.8	-	-	98.1	99.5	98.2	97.7	100.0	-	98.4	96.9
Buses	1	2	0	0	-	3	1	1	0	0	-	2	0	3	1	0	-	4	0	3	0	0	-	3	12
% Buses	0.5	1.9	0.0	-	-	1.0	2.1	0.9	0.0	-	-	0.5	0.0	0.4	1.2	-	-	0.4	0.0	0.4	0.0	0.0	-	0.3	0.4
Single-Unit Trucks	4	5	0	0	-	9	2	5	1	0	-	8	0	5	0	0	-	5	1	6	0	0	-	7	29
% Single-Unit Trucks	2.0	4.8	0.0	-	-	2.9	4.2	4.7	0.5	-	-	2.2	0.0	0.6	0.0	-	-	0.6	0.5	0.7	0.0	0.0	-	0.6	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	2	1	0	-	3	0	2	0	0	-	2	5
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	1.2	-	-	0.3	0.0	0.2	0.0	0.0	-	0.2	0.2
Bicycles on Road	1	11	1	0	-	13	2	5	2	0	-	9	0	1	2	0	-	3	0	2	3	0	-	5	30
% Bicycles on Road	0.5	10.6	10.0	-	-	4.2	4.2	4.7	0.9	-	-	2.5	0.0	0.1	2.5	-	-	0.3	0.0	0.2	2.3	0.0	-	0.4	1.1
Bicycles on Crosswalk	-	-	-	-	-	16	-	-	-	-	-	2	-	-	-	-	-	19	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	9.5	-	-	-	-	-	50.0	-	-	-	-	-	11.7	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	-	153	-	-	-	-	-	2	-	-	-	-	-	143	-	-	-	-	-	7	-
% Pedestrians	-	-	-	-	-	90.5	-	-	-	-	-	50.0	-	-	-	-	-	88.3	-	-	-	-	-	100.0	-



Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
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Count Name: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025
Page No: 3



Turning Movement Data Plot



Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025
Page No: 8

Turning Movement Peak Hour Data (4:00 PM)

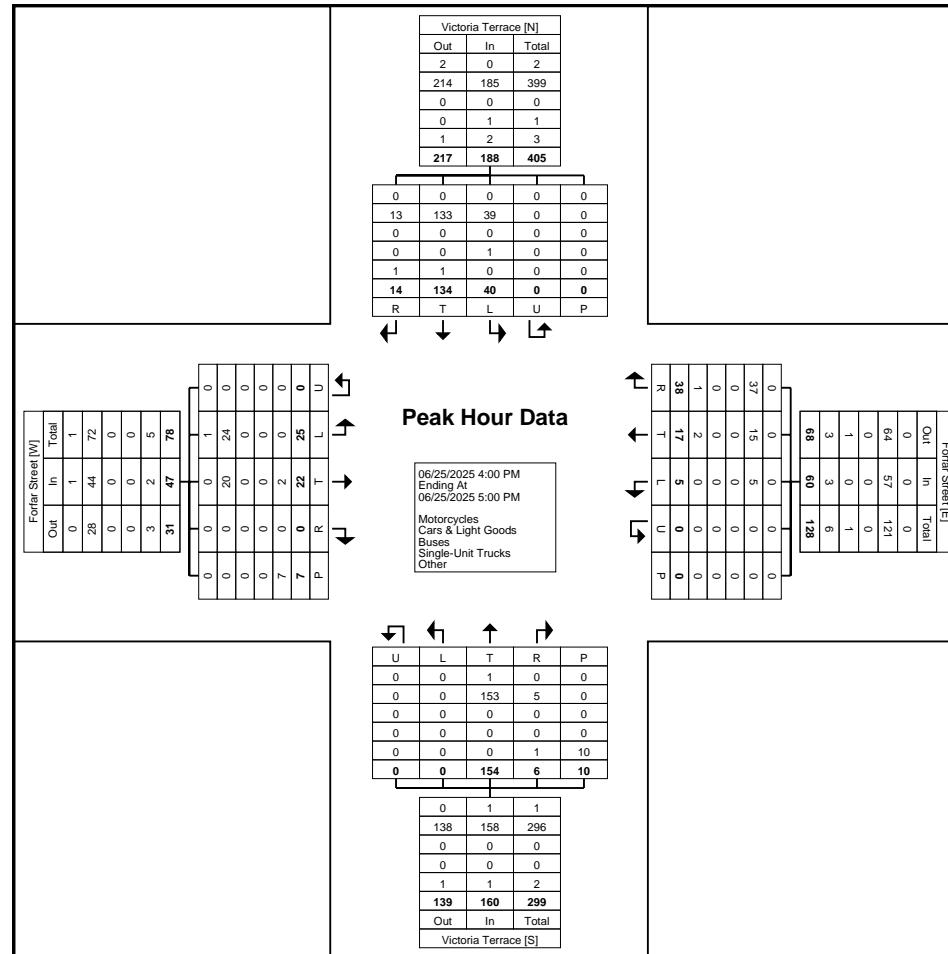
Start Time	Forfar Street Eastbound						Forfar Street Westbound						Victoria Terrace Northbound						Victoria Terrace Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:00 PM	5	5	0	0	0	10	0	3	12	0	0	15	0	40	0	0	3	40	7	29	3	0	0	39	104
4:15 PM	3	2	0	0	0	5	3	5	7	0	0	15	0	39	3	0	0	42	7	29	3	0	0	39	101
4:30 PM	7	6	0	0	6	13	1	2	10	0	0	13	0	35	2	0	6	37	13	40	2	0	0	55	118
4:45 PM	10	9	0	0	1	19	1	7	9	0	0	17	0	40	1	0	1	41	13	36	6	0	0	55	132
Total	25	22	0	0	7	47	5	17	38	0	0	60	0	154	6	0	10	160	40	134	14	0	0	188	455
Approach %	53.2	46.8	0.0	0.0	-	-	8.3	28.3	63.3	0.0	-	-	0.0	96.3	3.8	0.0	-	-	21.3	71.3	7.4	0.0	-	-	-
Total %	5.5	4.8	0.0	0.0	-	10.3	1.1	3.7	8.4	0.0	-	13.2	0.0	33.8	1.3	0.0	-	35.2	8.8	29.5	3.1	0.0	-	41.3	-
PHF	0.625	0.611	0.000	0.000	-	0.618	0.417	0.607	0.792	0.000	-	0.882	0.000	0.963	0.500	0.000	-	0.952	0.769	0.838	0.583	0.000	-	0.855	0.862
Motorcycles	1	0	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	2
% Motorcycles	4.0	0.0	-	-	-	2.1	0.0	0.0	0.0	-	-	0.0	-	0.6	0.0	-	-	0.6	0.0	0.0	0.0	-	-	0.0	0.4
Cars & Light Goods	24	20	0	0	-	44	5	15	37	0	-	57	0	153	5	0	-	158	39	133	13	0	-	185	444
% Cars & Light Goods	96.0	90.9	-	-	-	93.6	100.0	88.2	97.4	-	-	95.0	-	99.4	83.3	-	-	98.8	97.5	99.3	92.9	-	-	98.4	97.6
Buses	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	0	-	0	1	0	0	0	-	1	1
% Single-Unit Trucks	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	2.5	0.0	0.0	-	-	0.5	0.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	2	0	0	-	2	0	2	1	0	-	3	0	0	1	0	-	1	0	1	1	0	-	2	8
% Bicycles on Road	0.0	9.1	-	-	-	4.3	0.0	11.8	2.6	-	-	5.0	-	0.0	16.7	-	-	0.6	0.0	0.7	7.1	-	-	1.1	1.8
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	
Pedestrians	-	-	-	-	-	7	-	-	-	-	0	-	-	-	-	-	-	10	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-



Paradigm Transportation Solutions Limited
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Count Name: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025
Page No: 9



Turning Movement Peak Hour Data Plot (4:00 PM)



Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025
Page No: 1

Turning Movement Data

Start Time	Forfar Street Eastbound						Forfar Street Westbound						Gzowski Street Northbound						Gzowski Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	2	1	0	0	3	0	4	8	0	1	12	0	5	0	0	1	5	4	10	0	0	0	14	34
7:15 AM	2	8	1	0	1	11	1	6	5	0	1	12	0	5	1	0	0	6	5	12	1	0	1	18	47
7:30 AM	0	8	2	0	0	10	1	5	8	0	0	14	1	14	0	0	1	15	3	14	0	0	1	17	56
7:45 AM	2	6	1	0	0	9	1	6	7	0	0	14	0	7	0	0	0	7	7	11	0	0	0	18	48
Hourly Total	4	24	5	0	1	33	3	21	28	0	2	52	1	31	1	0	2	33	19	47	1	0	2	67	185
8:00 AM	2	9	1	0	0	12	1	11	8	0	1	20	1	10	0	0	2	11	7	8	2	0	0	17	60
8:15 AM	3	12	2	0	0	17	1	7	10	0	2	18	2	8	1	0	7	11	3	12	0	0	0	15	61
8:30 AM	5	16	12	0	1	33	3	14	21	0	1	38	1	8	2	0	12	11	9	27	0	0	0	36	118
8:45 AM	1	10	5	0	0	16	2	13	20	0	2	35	0	13	0	0	1	13	14	22	2	0	0	38	102
Hourly Total	11	47	20	0	1	78	7	45	59	0	6	111	4	39	3	0	22	46	33	69	4	0	0	106	341
9:00 AM	0	11	1	0	0	12	0	9	8	0	3	17	2	3	2	0	0	7	4	8	0	0	1	12	48
9:15 AM	2	6	2	0	0	10	1	3	9	0	3	13	0	5	1	0	0	6	2	10	0	0	0	12	41
9:30 AM	2	3	1	0	0	6	2	7	3	0	3	12	2	5	1	0	0	8	9	13	1	0	0	23	49
9:45 AM	0	5	2	0	0	7	2	5	8	0	5	15	0	6	1	0	0	7	6	10	2	0	0	18	47
Hourly Total	4	25	6	0	0	35	5	24	28	0	14	57	4	19	5	0	0	28	21	41	3	0	1	65	185
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11:30 AM	1	3	0	0	0	4	0	4	9	0	0	13	0	10	0	0	0	10	4	8	2	0	0	14	41
11:45 AM	0	9	0	0	1	9	0	5	6	0	0	11	0	14	1	0	0	15	7	14	2	0	0	23	58
Hourly Total	1	12	0	0	1	13	0	9	15	0	0	24	0	24	1	0	0	25	11	22	4	0	0	37	99
12:00 PM	0	7	4	0	0	11	0	5	3	0	1	8	1	16	0	0	0	17	9	16	4	0	0	29	65
12:15 PM	1	5	0	0	0	6	2	12	6	0	1	20	0	9	1	0	2	10	9	9	0	0	0	18	54
12:30 PM	3	5	1	0	0	9	1	11	5	0	2	17	1	5	0	0	2	6	10	17	3	0	0	30	62
12:45 PM	0	9	0	0	0	9	1	6	8	0	0	15	3	13	0	0	3	16	10	23	0	0	0	33	73
Hourly Total	4	26	5	0	0	35	4	34	22	0	4	60	5	43	1	0	7	49	38	65	7	0	0	110	254
1:00 PM	0	7	4	0	0	11	1	9	6	0	3	16	0	16	1	0	3	17	2	19	1	0	0	22	66
1:15 PM	1	11	2	0	0	14	0	2	10	0	0	12	1	4	1	0	2	6	11	16	1	0	0	28	60
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hourly Total	1	18	6	0	0	25	1	11	16	0	3	28	1	20	2	0	5	23	13	35	2	0	0	50	126
3:00 PM	3	7	0	0	1	10	4	17	8	0	0	29	3	16	1	0	5	20	5	22	1	0	0	28	87
3:15 PM	11	15	17	0	0	43	2	15	11	0	1	28	2	11	2	0	22	15	8	22	2	0	0	32	118
3:30 PM	1	12	3	0	0	16	2	10	7	0	1	19	1	14	2	0	0	17	19	17	2	0	0	38	90
3:45 PM	1	11	3	0	0	15	0	13	8	0	2	21	1	12	0	0	1	13	16	16	2	0	0	34	83
Hourly Total	16	45	23	0	1	84	8	55	34	0	4	97	7	53	5	0	28	65	48	77	7	0	0	132	378
4:00 PM	1	9	2	0	1	12	0	4	5	0	0	9	0	9	1	0	0	10	8	25	0	0	0	33	64
4:15 PM	1	9	1	0	0	11	1	15	7	1	0	24	0	3	3	0	1	6	3	19	2	1	0	25	66

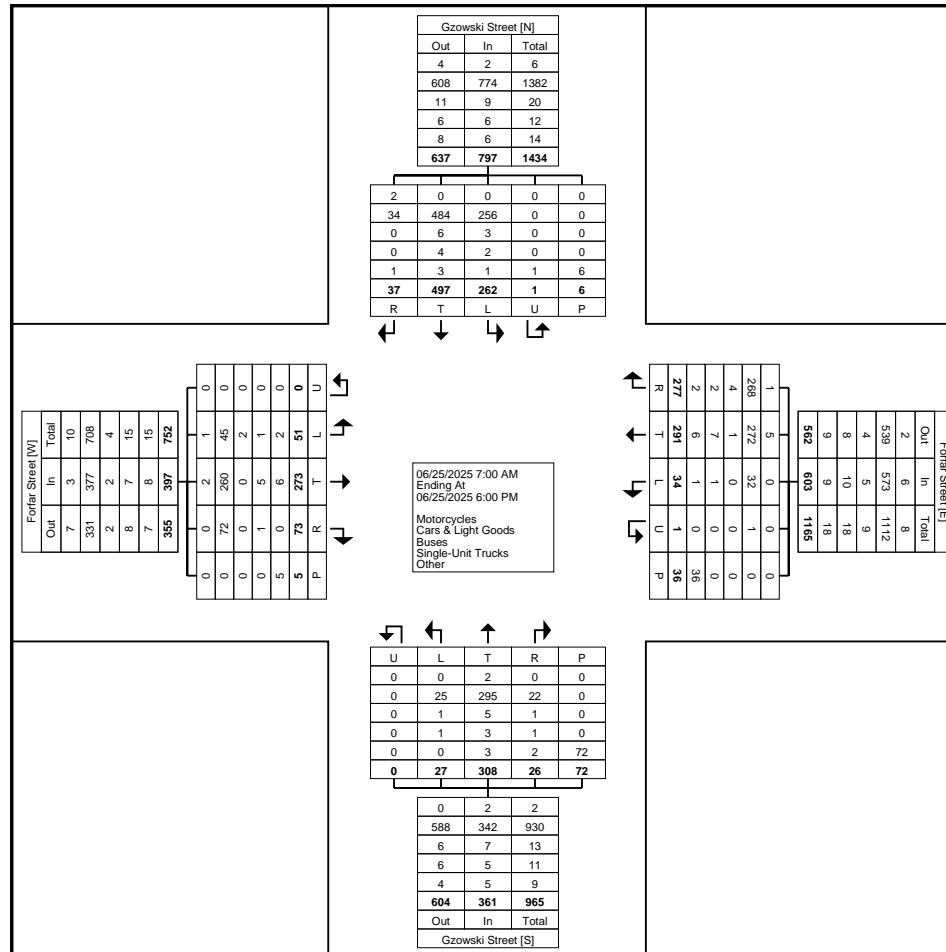
4:30 PM	2	17	1	0	0	20	2	11	8	0	3	21	0	12	1	0	1	13	11	16	1	0	2	28	82	
4:45 PM	3	12	1	0	0	16	0	16	18	0	0	34	1	8	0	0	2	9	8	12	0	0	0	20	79	
Hourly Total	7	47	5	0	1	59	3	46	38	1	3	88	1	32	5	0	4	38	30	72	3	1	2	106	291	
5:00 PM	0	5	2	0	0	7	1	13	7	0	0	21	0	10	2	0	2	12	13	18	0	0	0	31	71	
5:15 PM	0	11	0	0	0	11	0	9	10	0	0	19	2	16	0	0	0	18	21	17	4	0	0	42	90	
5:30 PM	3	5	0	0	0	8	1	15	12	0	0	28	1	11	1	0	0	13	7	18	1	0	1	26	75	
5:45 PM	0	8	1	0	0	9	1	9	8	0	0	18	1	10	0	0	2	11	8	16	1	0	0	25	63	
Hourly Total	3	29	3	0	0	35	3	46	37	0	0	86	4	47	3	0	4	54	49	69	6	0	1	124	299	
Grand Total	51	273	73	0	5	397	34	291	277	1	36	603	27	308	26	0	72	361	262	497	37	1	6	797	2158	
Approach %	12.8	68.8	18.4	0.0	-	-	5.6	48.3	45.9	0.2	-	-	7.5	85.3	7.2	0.0	-	-	32.9	62.4	4.6	0.1	-	-	-	
Total %	2.4	12.7	3.4	0.0	-	18.4	1.6	13.5	12.8	0.0	-	27.9	1.3	14.3	1.2	0.0	-	16.7	12.1	23.0	1.7	0.0	-	36.9	-	
Motorcycles	1	2	0	0	-	3	0	5	1	0	-	6	0	2	0	0	-	2	0	0	2	0	-	2	13	
% Motorcycles	2.0	0.7	0.0	-	-	0.8	0.0	1.7	0.4	0.0	-	1.0	0.0	0.6	0.0	-	-	0.6	0.0	0.0	5.4	0.0	-	0.3	0.6	
Cars & Light Goods	45	260	72	0	-	377	32	272	268	1	-	573	25	295	22	0	-	342	256	484	34	0	-	774	2066	
% Cars & Light Goods	88.2	95.2	98.6	-	-	95.0	94.1	93.5	96.8	100.0	-	95.0	92.6	95.8	84.6	-	-	94.7	97.7	97.4	91.9	0.0	-	97.1	95.7	
Buses	2	0	0	0	-	2	0	1	4	0	-	5	1	5	1	0	-	7	3	6	0	0	-	9	23	
% Buses	3.9	0.0	0.0	-	-	0.5	0.0	0.3	1.4	0.0	-	0.8	3.7	1.6	3.8	-	-	1.9	1.1	1.2	0.0	0.0	-	1.1	1.1	
Single-Unit Trucks	1	5	1	0	-	7	1	7	2	0	-	10	1	3	1	0	-	5	2	4	0	0	-	6	28	
% Single-Unit Trucks	2.0	1.8	1.4	-	-	1.8	2.9	2.4	0.7	0.0	-	1.7	3.7	1.0	3.8	-	-	1.4	0.8	0.8	0.0	0.0	-	0.8	1.3	
Articulated Trucks	0	0	0	0	-	0	0	1	1	0	-	2	0	0	0	0	-	0	0	1	1	0	-	2	4	
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.4	0.0	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	0.2	2.7	0.0	-	0.3	0.2	
Bicycles on Road	2	6	0	0	-	8	1	5	1	0	-	7	0	3	2	0	-	5	1	2	0	1	-	4	24	
% Bicycles on Road	3.9	2.2	0.0	-	-	2.0	2.9	1.7	0.4	0.0	-	1.2	0.0	1.0	7.7	-	-	1.4	0.4	0.4	0.0	100.0	-	0.5	1.1	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	5	-	-	-	-	0	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	11.1	-	-	-	-	-	6.9	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	5	-	-	-	-	-	32	-	-	-	-	-	67	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	88.9	-	-	-	-	-	93.1	-	-	-	-	-	100.0	-	-



Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
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Count Name: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025
Page No: 3



Turning Movement Data Plot



Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025
Page No: 8

Turning Movement Peak Hour Data (3:00 PM)

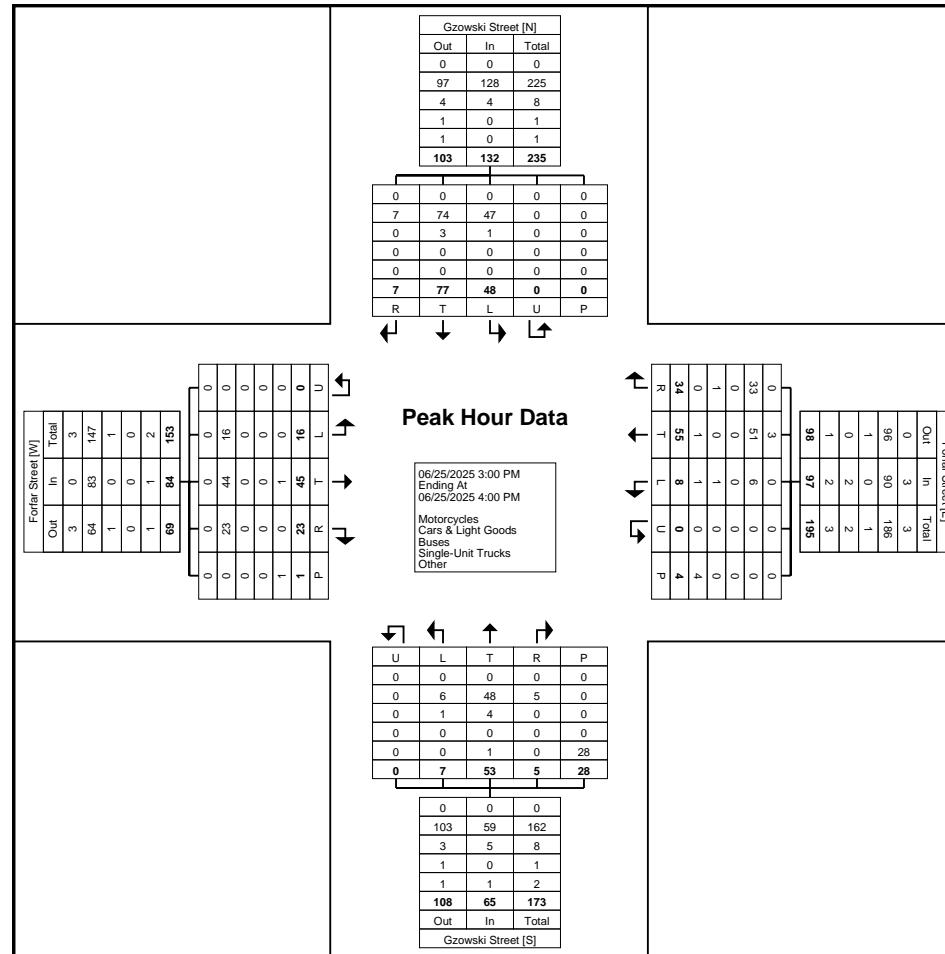
Start Time	Forfar Street Eastbound						Forfar Street Westbound						Gzowski Street Northbound						Gzowski Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
3:00 PM	3	7	0	0	1	10	4	17	8	0	0	29	3	16	1	0	5	20	5	22	1	0	0	28	87
3:15 PM	11	15	17	0	0	43	2	15	11	0	1	28	2	11	2	0	22	15	8	22	2	0	0	32	118
3:30 PM	1	12	3	0	0	16	2	10	7	0	1	19	1	14	2	0	0	17	19	17	2	0	0	38	90
3:45 PM	1	11	3	0	0	15	0	13	8	0	2	21	1	12	0	0	1	13	16	16	2	0	0	34	83
Total	16	45	23	0	1	84	8	55	34	0	4	97	7	53	5	0	28	65	48	77	7	0	0	132	378
Approach %	19.0	53.6	27.4	0.0	-	-	8.2	56.7	35.1	0.0	-	-	10.8	81.5	7.7	0.0	-	-	36.4	58.3	5.3	0.0	-	-	-
Total %	4.2	11.9	6.1	0.0	-	22.2	2.1	14.6	9.0	0.0	-	25.7	1.9	14.0	1.3	0.0	-	17.2	12.7	20.4	1.9	0.0	-	34.9	-
PHF	0.364	0.750	0.338	0.000	-	0.488	0.500	0.809	0.773	0.000	-	0.836	0.583	0.828	0.625	0.000	-	0.813	0.632	0.875	0.875	0.000	-	0.868	0.801
Motorcycles	0	0	0	0	-	0	0	3	0	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	3
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	5.5	0.0	-	-	3.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.8
Cars & Light Goods	16	44	23	0	-	83	6	51	33	0	-	90	6	48	5	0	-	59	47	74	7	0	-	128	360
% Cars & Light Goods	100.0	97.8	100.0	-	-	98.8	75.0	92.7	97.1	-	-	92.8	85.7	90.6	100.0	-	-	90.8	97.9	96.1	100.0	-	-	97.0	95.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	1	4	0	0	-	5	1	3	0	0	-	4	9
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	14.3	7.5	0.0	-	-	7.7	2.1	3.9	0.0	-	-	3.0	2.4
Single-Unit Trucks	0	0	0	0	-	0	1	0	1	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	12.5	0.0	2.9	-	-	2.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	1	0	0	-	1	1	1	0	0	-	2	0	1	0	0	-	1	0	0	0	0	-	0	4
% Bicycles on Road	0.0	2.2	0.0	-	-	1.2	12.5	1.8	0.0	-	-	2.1	0.0	1.9	0.0	-	-	1.5	0.0	0.0	0.0	-	-	0.0	1.1
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	50.0	-	-	-	-	-	7.1	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	26	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	50.0	-	-	-	-	-	92.9	-	-	-	-	-	-	-



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Turning Movement Peak Hour Data Plot (3:00 PM)

Appendix C: STAMSON Validation File

Thornton Tomasetti



Client Name
2566201 Ontario Inc.

Project Name
650 Victoria Terrace

Notes:
Ornament Implementation in Cadna/A fairly matches the Stamson validation calculation

Figure Title
STAMSON Validation File Location

Produced By
AFS

TT Project #
25015451

Date
Aug 15, 2025

C.1

STAMSON 5.0 NORMAL REPORT Date: 15-08-2025 10:08:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 650victR.te Time Period: Day/Night 16/8 hours
Description: South Facade, 1st floor

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

Car traffic volume : 5414/602 veh/TimePeriod
Medium truck volume : 46/5 veh/TimePeriod
Heavy truck volume : 34/4 veh/TimePeriod
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

Angle1 Angle2 : -90.00 deg 69.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 28.20 / 28.20 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: VictoriaTerr (day)

Source height = 0.89 m

ROAD (0.00 + 53.61 + 0.00) = 53.61 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 69 0.00 56.89 0.00 -2.74 -0.54 0.00 0.00 0.00 53.61

Segment Leq : 53.61 dBA

Total Leq All Segments: 53.61 dBA

Results segment # 1: VictoriaTerr (night)

Source height = 0.90 m

ROAD (0.00 + 47.16 + 0.00) = 47.16 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

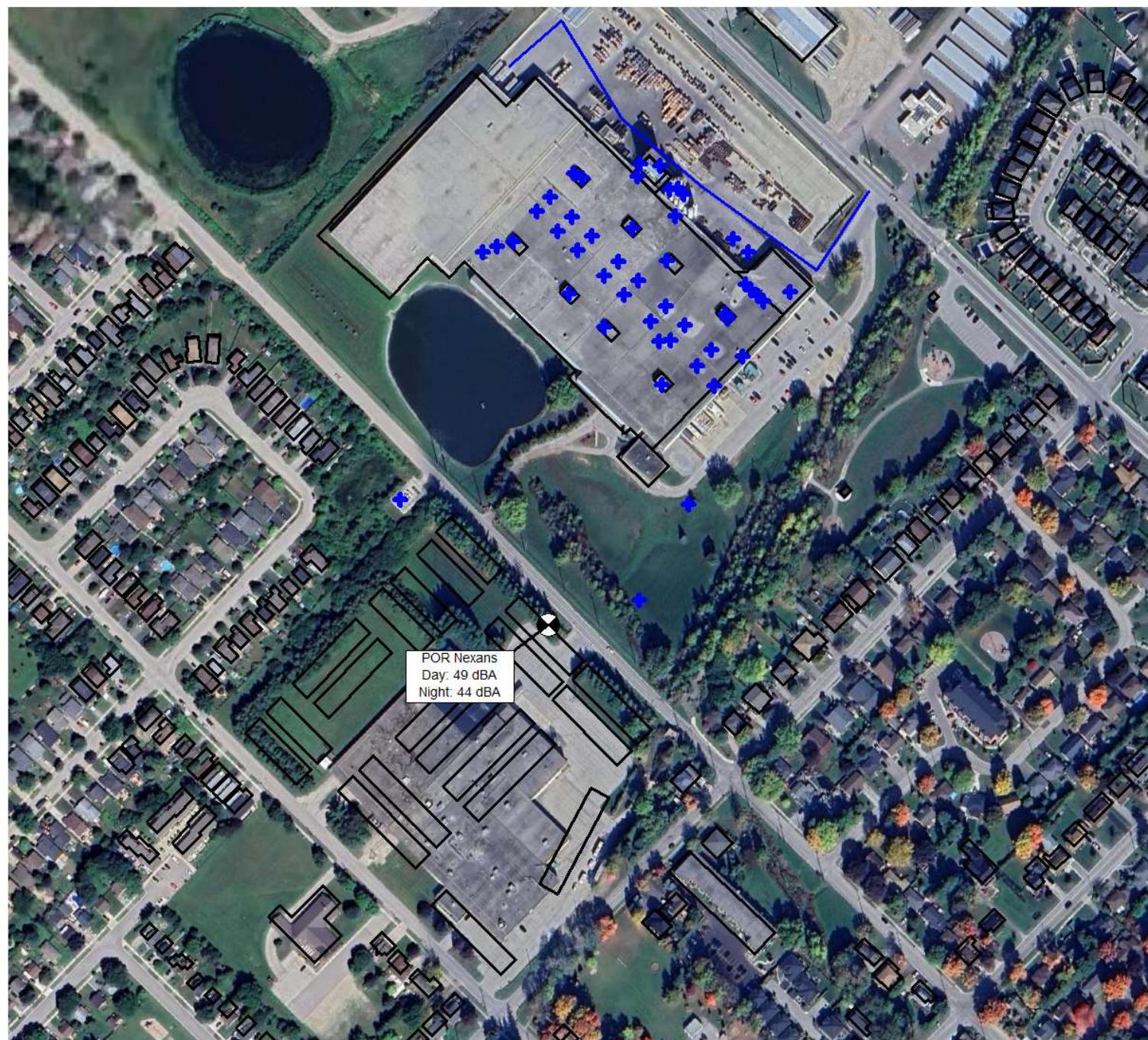
-90 69 0.00 50.44 0.00 -2.74 -0.54 0.00 0.00 0.00 47.16

Segment Leq : 47.16 dBA

Total Leq All Segments: 47.16 dBA
TAL Leq FROM ALL SOURCES (DAY): 53.61

Appendix D: CadnaA Modelling Output for Stationary Noise

Thornton Tomasetti



POR Nexans
Day: 49 dBA
Night: 44 dBA

Client Name
2566201 Ontario Inc.

Project Name
650 Victoria Terrace

Notes:

Figure Title
CadnaA Output File
Location for Nexans

Produced By
AFS

TT Project #
25015451

Date
Aug 15, 2025

D.1

Point Source, ISO 9613, Name: "General Exhaust", ID: "I0400!EX118"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
75	550096.75	4840543.73	8.10	0 DEN	500	75.0	0.0	0.0	0.0	59.4	0.5	-0.7	0.0	0.0	7.9	0.0	0.0	7.9	
76	550096.75	4840543.73	8.10	1 DEN	500	75.0	0.0	0.0	0.0	59.5	0.5	-0.7	0.0	0.0	9.0	0.0	1.0	5.7	

Point Source, ISO 9613, Name: "Intake", ID: "I0400!IN5"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
77	550041.06	4840476.81	11.60	0 DEN	500	68.0	0.0	0.0	0.0	56.0	0.3	-0.7	0.0	0.0	0.0	0.0	0.0	12.4	

Point Source, ISO 9613, Name: "Intake", ID: "I0400!IN6"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
78	550002.13	4840515.38	11.60	0 DEN	500	68.0	0.0	0.0	0.0	57.1	0.4	-0.7	0.0	0.0	0.0	0.0	0.0	11.2	

Point Source, ISO 9613, Name: "General Exhaust", ID: "I0400!EX116"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
79	550039.16	4840506.09	9.00	0 DEN	500	68.0	0.0	0.0	0.0	57.2	0.4	-0.7	0.0	0.0	0.0	0.0	0.0	11.2	

Point Source, ISO 9613, Name: "Intake", ID: "I0400!IN7"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
80	549978.84	4840537.39	11.60	0 DEN	500	68.0	0.0	0.0	0.0	57.9	0.4	-0.7	0.0	0.0	0.0	0.0	0.0	10.4	

Point Source, ISO 9613, Name: "Intake", ID: "I0400!IN1"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
81	550084.78	4840521.16	11.60	0 DEN	500	68.0	0.0	0.0	0.0	58.5	0.5	-0.7	0.0	0.0	0.0	0.0	0.0	9.8	

Point Source, ISO 9613, Name: "Aluminum Drawing Line", ID: "I0400!IF5"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
82	550126.48	4840538.84	10.40	0 DEN	500	69.0	0.0	0.0	0.0	59.8	0.5	-0.7	0.0	0.0	0.0	0.0	0.0	9.4	

Point Source, ISO 9613, Name: "Intake", ID: "I0400!IN2"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
83	550043.91	4840560.07	11.60	0 DEN	500	68.0	0.0	0.0	0.0	59.2	0.5	-0.7	0.0	0.0	0.0	0.0	0.0	9.1	

Point Source, ISO 9613, Name: "Intake", ID: "I0400!IN8"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
84	549941.39	4840572.35	11.60	0 DEN	500	68.0	0.0	0.0	0.0	59.2	0.5	-0.7	0.0	0.0	0.0	0.0	0.0	9.0	

Point Source, ISO 9613, Name: "Intake", ID: "I0400!IN3"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
85	550021.12	4840581.68	11.60	0 DEN	500	68.0	0.0	0.0	0.0	59.7	0.5	-0.7	0.0	0.0	4.8	0.0	0.0	3.8	

Point Source, ISO 9613, Name: "Intake", ID: "I0400!IN4"

Nr.	X (m)	Y (m)	Z (m)	Refl. DEN	Freq. (Hz)	Lw dB(A)	I/a dB	Optime (dB)	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
86	549981.65	4840618.47	11.60	0 DEN	500	68.0	0.0	0.0	0.0	60.6	0.6	-0.7	0.0	0.0	4.8	0.0	0.0	2.8	