Jade Acoustics Inc. Consulting Engineers
411 Confederation Parkway
Unit 19
Concord, Ontario
L4K 0A8
Tel: (905) 660-2444
Fax: (905) 660-4110

PRELIMINARY ENVIRONMENTAL NOISE REPORT

PROPOSED RESIDENTIAL DEVELOPMENT
DIXIE ROAD AND RATHBURN ROAD EAST
CITY OF MISSISSAUGA

Prepared for
1315 Bough Beeches Boulevard Limited
c/o Stanford Homes

Revised June 29, 2026
March 23, 2026
File: 05-070

TABLE OF CONTENTS

	SUMMARY	1
1.0	INTRODUCTION	3
2.0	NOISE SOURCES	5
	2.1 Transportation Sources	5
	2.2 Stationary Sources	5
3.0	ENVIRONMENTAL NOISE CRITERIA	7
	3.1 Road	7
	3.1.1 Indoors	7
	3.1.2 Outdoors	8
	3.2 Stationary Sources	9
	3.3 City of Mississauga Official Plan	9
	3.4 City of Mississauga Noise Control By-law and Nuisance Type Noise By-law	10
	3.5 Region of Peel Guidelines	10
4.0	NOISE IMPACT ASSESSMENT	11
	4.1 Transportation Sources	11
	4.2 Stationary Sources	12
5.0	IMPACT OF THE DEVELOPMENT ON THE ENVIRONMENT	16
6.0	IMPACT OF THE DEVELOPMENT ON ITSELF	17
7.0	NOISE MITIGATION REQUIREMENTS	18
	7.1 Transportation Sources	18
	7.1.1 Indoors	18
	7.1.2 Outdoors	19
	7.2 Stationary Sources	20
8.0	RECOMMENDATIONS	21
9.0	CONCLUSION	22
10.0	STATEMENT OF LIMITATIONS	23
11.0	REFERENCES	24

LIST OF TABLES

TABLE 1 SUMMARY OF TRAFFIC DATA 25

TABLE 2 SUMMARY OF PREDICTED SOUND LEVELS OUTDOORS DUE TO ROAD TRAFFIC 26

TABLE 3 SUMMARY OF MINIMUM NOISE MITIGATION MEASURES 27

LIST OF FIGURES

FIGURE 1 KEY PLAN

FIGURE 2 PLAN OF DEVELOPMENT SHOWING MINIMUM NOISE MITIGATION MEASURES

FIGURE 3 TORONTO PEARSON INTERNATIONAL AIRPORT OPERATING AREA AND COMPOSITE NOISE CONTOURS

FIGURE 4A PLAN SHOWING ANALYZED SOURCES OF ROAD NOISE AND PREDICTED FAÇADE SOUND LEVELS WITHOUT MITIGATION MEASURES

FIGURE 4B PLAN SHOWING ANALYZED SOURCES OF ROAD NOISE AND PREDICTED OUTDOOR LIVING AREA SOUND LEVELS

FIGURE 5A PLAN SHOWING ANALYZED SOURCES OF CONTINUOUS NOISE

FIGURE 5B PLAN SHOWING ANALYZED SOURCES OF CONTINUOUS NOISE AND IMPULSIVE NOISE AT FOOD BASICS

FIGURE 6 PLAN SHOWING PREDICTED SOUND LEVELS DUE TO CONTINUOUS NOISE AND IMPULSIVE NOISE – WITHOUT MITIGATION MEASURES

LIST OF APPENDICES

APPENDIX A	CORRESPONDENCE REGARDING ROAD TRAFFIC DATA	A-1
APPENDIX B	ENVIRONMENTAL NOISE CRITERIA.....	B-1
APPENDIX C	SAMPLE CALCULATION OF PREDICTED UNMITIGATED SOUND LEVELS – TRANSPORTATION SOURCES.....	C-1
APPENDIX D	SAMPLE CALCULATION OF SOUND LEVELS DUE TO STATIONARY SOURCES - CADNAA.....	D-1
APPENDIX E	SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION.....	E-1
APPENDIX F	QUESTIONNAIRE FROM FOOD BASICS	F-1

SUMMARY

The proposed residential development is located at the northwest corner of Bough Beeches Boulevard and Rathburn Road East in the City of Mississauga and is subject to road traffic noise from Dixie Road, Rathburn Road East and Bough Beeches Boulevard. Potential noise associated with the existing commercial development located to the south and the existing residential buildings located to the west and to the east of the proposed site have been investigated. The proposed site is located outside the NEP/NEF 25 composite noise contour lines for Toronto Pearson International Airport and outside the airport operating area and it is not impacted by rail traffic.

The proposed development consists of one 13-storey residential building including a 1-storey podium and a mechanical penthouse at the uppermost level. The rental building also includes two (2) levels of underground parking and an at-grade common outdoor amenity area on a portion of the property at 1315 Bough Beeches Boulevard.

The environmental noise guidelines for transportation and stationary noise sources of the City of Mississauga, the Region of Peel and the Ministry of Environment, Conservation and Parks (MECP), set out sound level limits for both the indoor (transportation sources only) and outdoor spaces (both transportation and stationary sources).

Using the road traffic data obtained from LEA Consulting Ltd., the City of Mississauga and the Region of Peel, the predicted sound levels for various locations in the development were determined.

The results of the road traffic noise predictions were used to determine the required mitigation measures to address the transportation noise sources. The proposed high-rise building requires provision for adding future central air conditioning, acoustic barriers and warning clauses. The proposed rental building is expected to be provided with central air conditioning regardless of the acoustical requirements; therefore, satisfying the acoustic (ventilation) requirements.

Based on the preliminary analysis, standard exterior window/exterior door and exterior wall construction will be acoustically satisfactory for all residential units. Prior to issuance of building permits, the acoustical requirements should be reviewed based on the final plans to ensure compliance with the applicable guidelines. Prior to final occupancy, the dwelling units should be inspected by an acoustical consultant to ensure the required mitigation measures have been incorporated.

There is an existing Food Basics store located south of the subject site. The analysis of the noise sources associated with the commercial development was based on information collected by

Jade Acoustics Inc. during site visit, information provided by Food Basics and information from other Jade files for comparable facilities.

There are also other commercial uses to the south beyond the Food Basics. As there is an existing residential 20-storey apartment building located on the property with comparable separation distances to these commercial uses, achieving applicable noise guidelines at the existing residential also addresses the proposed development. As such, noise sources associated these commercial uses to the south, except for the Food Basics, were not assessed further in this report. Mitigation measures (if any) to achieve compliance at the existing residential receptors are expected to be sufficient to achieve sound level limit compliance at the proposed development as well.

The analysis of the mechanical equipment installed on the roof of the existing 20-storey apartment building located west of the proposed site (to remain) as well as the garage exhaust fans was prepared based on rooftop inventory conducted and the existing mechanical drawings of the 20-storey apartment building.

There is one existing 11-storey high-rise residential building at 1500 Grazia Court, located east of the proposed development. The analysis of the mechanical equipment installed on the rooftop as well as garage exhaust fans was prepared based on a site investigation at the building and information provided by building staff.

Additionally, there is one existing 3-storey retirement building at 1500 Rathburn Road East, located at the southeast corner of Rathburn Road East and Bough Beeches Boulevard. The analysis of the mechanical equipment installed on the rooftop was prepared based on information from other Jade files for similar developments due to no response to Jade's inquiry was received from the building staff.

Due to the proximity of the existing commercial and/or high-density residential/retirement uses, all proposed residential units should be provided with a proximity warning clause notifying the purchasers/tenants that the activities and/or equipment may at times be audible. See Table 3 and Notes to Table 3.

Information regarding the mechanical equipment associated with the proposed building is not available at this stage of the project. Once detailed mechanical drawings become available, a noise analysis will need to be conducted to ensure that all mechanical equipment meet the MECP guidelines at the closest noise sensitive receptor locations.

1.0 INTRODUCTION

Jade Acoustics Inc. has been retained by the proponent to revise the Preliminary Environmental Noise Report dated March 23, 2026, based on the updated site and architectural plans prepared by Arcadis.

The revised report addresses one comment provided by the City of Mississauga after the first submission which is shown below in italics. Section 7.1.2 includes our response.

"As the anticipated noise levels are below 60 dBA, consider minimizing the required solid acoustic fence around the Amenity space and adding the required warning clauses added to the tenant agreements. The barrier closest to Rathburn is the priority to remain whereas the barrier along Bough Beeches can be perforated or minimized in height.

Revise the Noise Feasibility Study and the Landscape Plans accordingly".

As in the March 23, 2026 report, the revised report investigates the potential impact of noise on the proposed development to the satisfaction of the City of Mississauga and the Region of Peel. The report was prepared for the Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) submission to the City of Mississauga.

A Feasibility Environmental Noise Report dated January 23, 2006, revised February 16, 2007 was previously prepared by Jade Acoustics Inc. for the subject site under a different proponent. This Preliminary Environmental Noise Report supersedes the Feasibility Environmental Noise Report.

An evaluation of the potential acoustic impact between the dwelling units and all internal acoustic matters is outside of the scope of work of this report.

The proposed site is identified as:

Part of Lot 5
Concession 2
North of Dundas Street
City of Mississauga
Regional Municipality of Peel

The proposed residential development consists of one 13-storey residential building including a 1-storey podium and a mechanical penthouse on the uppermost level. The building will also include two (2) levels of underground parking, as well as private and common indoor and outdoor amenity spaces. There is one (1) existing twenty-storey apartment building located immediately west of the proposed building within the property which is to remain.

The subject site is located at the northwest corner of Bough Beeches Boulevard and Rathburn Road East on a portion of the property at 1315 Bough Beeches Boulevard. The site is bounded by Bough Beeches Boulevard to the east, Rathburn Road East to the south, Dixie Road to the west and existing residential developments in the close proximity.

The surrounding land uses include existing commercial developments to the south and existing residential and retirement developments to the north, east and west. See Figure 1 for a Key Plan.

The analysis was based on the following:

- Site plan, architectural plans and elevations prepared by Arcadis, dated June 30, 2026;
- Draft Grading plans prepared by Fabian Papa & partners received February 20, 2026;
- Mechanical Drawings for the existing 20-storey apartment building, received on September 5, 2025;
- Road traffic information provided by LEA Consulting Ltd. on July 22, 2025;
- Road traffic information provided by Region of Peel and City of Mississauga; and
- Site visits conducted by Jade Acoustics Inc. on July 23, 2025 and February 26, 2026.

Figure 2 shows the site plan.

Figures 4A to 4B show the predicted sound levels due to transportation noise sources.

Figures 5A and 5B show the stationary noise sources analyzed. Figure 6 shows the predicted sound levels due to stationary noise sources.

2.0 NOISE SOURCES

2.1 Transportation Sources

The noise sources to be investigated for potential impact on the proposed development are road traffic on Dixie Road, Rathburn Road East and Bough Beeches Boulevard. This site is not affected by rail traffic.

Road Traffic

The ultimate road traffic data were obtained from the Region of Peel for Dixie Road and the City of Mississauga for Rathburn Road East.

The 2036 future total traffic volumes for Bough Beeches Boulevard were calculated based on the 2025 AADT provided by LEA Consulting Ltd., applying an annual growth rate of 2%. Truck percentages were also provided by the traffic consultant, and a 90/10 day-night traffic split was assumed and accounted for in the analysis.

The road traffic information is summarized in Table 1. Correspondence regarding the road traffic information is included in Appendix A.

Aircraft Traffic

Figure 3 shows the proposed site on the Toronto Pearson International Airport, Airport Operating Area (AOA) and Composite Noise Contour map.

The site is located outside the NEF/NEP 25 composite noise contour line and AOA due to the aircraft traffic from Toronto Pearson International Airport; therefore, further analysis is not required.

2.2 Stationary Sources

Stationary Sources External to Proposed Development

There is an existing commercial development, Rockwood Mall, located to the south of the proposed development and Rathburn Road East. The major noise sources associated with the existing plaza are the rooftop mechanical equipment and truck operations at the Food Basics store.

Other stationary sources that could potentially affect the proposed site are rooftop mechanical equipment associated with the 11-storey high-rise residential building located east of the

proposed site and the three-storey building (The Beechwood Retirement Residence) located at the southeast corner of Rathburn Road East and Bough Beeches Boulevard.

The mechanical equipment located on the roof of the existing 20-storey apartment building west of the proposed site is also a potential noise source.

This site is not affected by industrial noise sources.

Stationary Sources Associated with Proposed Development

Information regarding the mechanical equipment associated with the proposed building is not available at this stage of the project. Once detailed mechanical drawings become available, a noise analysis will need to be conducted to ensure that all mechanical equipment meet the MECP guidelines at the closest noise sensitive receptor locations.

3.0 ENVIRONMENTAL NOISE CRITERIA

The MECP document "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", dated August, 2013, released October 21, 2013 (updated final version # 22) was used in the analysis. A brief summary of the NPC-300 guidelines is given in Appendix B.

The City of Mississauga Official Plan (Section 6.10, Noise, pages dated March 13, 2017, August 2, 2017, April 8, 2019, April 8, 2021, and July 27, 2023) and the General Guidelines for the Preparation of Acoustical Reports in the Region of Peel (dated November 2012, updated August 2020) were also used in preparation of this report.

The environmental noise criteria used for residential developments in the City of Mississauga and the Region of Peel, and MECP environmental noise criteria are summarized below.

3.1 Road

3.1.1 Indoors

If the nighttime (11:00 p.m. to 7:00 a.m.) sound level in terms of Leq at the exterior face of a bedroom or living/dining room window/exterior door is 60 dBA or greater and/or if the daytime (7:00 a.m. to 11:00 p.m.) sound level in terms of Leq at the exterior face of a bedroom or living/dining room window/exterior door is greater than 65 dBA, means must be provided so that windows and/or exterior doors can be kept closed for noise control purposes and central air conditioning is required.

For nighttime sound levels (LeqNight) greater than 50 dBA to less than 60 dBA on the exterior face of a bedroom or living/dining room window/exterior door and/or daytime sound levels (LeqDay) greater than 55 dBA to less than or equal to 65 dBA on the exterior face of a bedroom or living/dining room window/exterior door, there need only be the provision for adding central air conditioning by the occupant at a later date. This typically involves a ducted heating system sized to accommodate the addition of central air conditioning by the occupant at a later date.

If the proposed high-rise building is provided with central air conditioning for all units, the above requirements would be achieved.

A warning clause advising the occupant of potential interference with some activities is also required.

As required by the MECP and Region of Peel, indoor noise criteria for road traffic noise is 40 dBA (Leq8hour) for the bedrooms during nighttime hours, 45 dBA (Leq8hour) for living/dining rooms during nighttime hours and 45 dBA (Leq16hour) for the living/dining rooms and bedrooms during daytime hours. These criteria are used to determine the architectural requirements due to the road traffic.

3.1.2 Outdoors

The definition of outdoor amenity area as defined by the MECP is given below.

"Outdoor Living Area (OLA)

(applies to impact assessments of transportation sources) means that part of a noise sensitive land use that is:

- intended and designed for the quiet enjoyment of the outdoor environment; and
- readily accessible from the building.

The OLA includes:

- backyards, front yards, gardens, terraces or patios;
- balconies and elevated terraces (e.g. rooftops), with a minimum depth of 4 metres, that are not enclosed, provided they are the only outdoor living area (OLA) for the occupant; or
- common outdoor living areas (OLAs) associated with high-rise multi-unit buildings."

For the outdoor amenity areas, a design goal of 55 dBA for the daytime period between 7:00 a.m. to 11:00 p.m. is used for road traffic. In some cases, an excess not exceeding 5 dBA is considered acceptable. Where the unmitigated sound levels during the day exceed 55 dBA (Leq16hour, daytime) but are equal to or less than 60 dBA (Leq16hour, daytime), a warning clause is required and mitigation should be considered. Where the unmitigated sound levels exceed 60 dBA, mitigation measures and a warning clause are required.

For both indoor and outdoor conditions, where the acoustic criteria are exceeded, warning clauses must be placed in offers of purchase and sale or lease agreements and included in the development agreement.

3.2 Stationary Sources

The guidelines of the Ontario Ministry of the Environment, Conservation and Parks (MECP) for stationary sources included in the NPC-300 document titled “Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning” are to be used for commercial and industrial facilities.

The MECP also has vibration guidelines with respect to stationary sources, NPC-207. These guidelines require that the peak vibration velocities not exceed 0.3 mm/s at the point of reception during the day or night.

The MECP recognizes the need for back-up beepers/alarms as safety devices and as such does not have any guidelines or criteria to address these sources.

It should be noted that the MECP guidelines do not require that the source be inaudible, but rather that specific sound level limits be achieved.

With respect to stationary sources of noise in urban areas, the MECP guidelines require that the sound level due to the stationary source at the building façade and outdoor amenity spaces not exceed the sound level due to road traffic and in certain situations due to rail traffic in any hour of source operation, subject to specific exclusions. Tables C-5, C-6, C-7 and C-8 of NPC-300 included in Appendix B provided the exclusion limit values of one-hour equivalent sound level (Leq,dBA) and impulsive sound level (LLM,dBAI).

In general, if the criteria for a stationary source of noise are exceeded, the MECP recommends that control be implemented at the source rather than at the receiver. Alternatively, if the receiver is set back from the source or if a physical barrier is constructed so that the criteria can be met at the receiver, no additional mitigative measures are required. Treatment of the receptor building by the use of suitable wall and window construction and central air conditioning to keep windows closed is not an acceptable solution to the MECP in Class 1 and 2 areas (urban). In addition, a warning clause in offers of purchase and sale and/or lease agreement noting the proximity of dwellings to such a source should be considered.

3.3 City of Mississauga Official Plan

The City of Mississauga has indoor sound level criteria for road traffic which consist of the indoor sound level limits from Table C-2 and the supplementary indoor sound level limits from Table C-9 both included in the MECP NPC-300 noise guidelines.

3.4 City of Mississauga Noise Control By-law and Nuisance Type Noise By-law

The City of Mississauga has two by-laws to prohibit or regulate unusual noises likely to disturb the inhabitants of the City; Noise Control By-law Number 0360-1979 (as amended) and Nuisance Type Noise By-law Number 0785-1980 (as amended). The by-laws do not provide specific sound level limits but rather provide qualitative information with respect to noise sources and prohibitions by time and place.

3.5 Region of Peel Guidelines

The Region of Peel document titled “General Guidelines for the Preparation of Acoustical Report in the Region of Peel” dated November 2012 (updated August 2020), outlines requirements for the assessment of proposed residential developments in the Region of Peel.

4.0 NOISE IMPACT ASSESSMENT

As required by the MECP, Region of Peel, and City of Mississauga guidelines, the transportation sources and stationary sources were assessed independently.

4.1 Transportation Sources

Sound levels at the common outdoor amenity spaces and at the building envelopes of the proposed residential building in terms of Leq, the energy equivalent continuous sound levels for both day (16 hours) and night (8 hours) were predicted using ORNAMENT, the MECP Traffic Noise Prediction Model for road traffic, implemented within the CadnaA computer program (Version 2025MR1). The respective road traffic reference sound levels from STAMSON were used to calibrate the CadnaA noise source modelling (line sources) in order to account for the complexity of the site geometry, while preparing the analysis using MECP approved calculation methods as the basis.

The topography between the source and the receiver has been considered. Shielding provided by the proposed building as well as the existing 20-storey apartment building immediately to the west has been accounted for in the analysis.

Based on the site and architectural plans referenced in Section 1.0, there is one (1) proposed at-grade common outdoor amenity area, which will be accessible to all future occupants of the proposed building. The unmitigated daytime sound level at the centre of the at-grade common outdoor amenity area is predicted to be 59 dBA. Other private balconies, elevated terraces and common outdoor amenity areas associated with the proposed building do not require assessment as the centrally located protected common outdoor amenity area has been provided.

For the proposed residential building, the unmitigated sound levels at the worst-case façade are predicted to be up to 64 dBA for the daytime period (16 hours) between 7:00 a.m. and 11:00 p.m. and up to 57 dBA for the nighttime period (8 hours) between 11:00 p.m. and 7:00 a.m.

See Table 2 and Figures 4A to 4B for additional information and a detailed summary of unmitigated sound levels due to transportation sources. Appendix C contains sample calculations of the sound levels.

Where the sound level limits are predicted to be exceeded, mitigative measures and warning clauses are required.

As can be seen from the results, the unmitigated sound levels due to transportation sources are predicted to exceed the MECP sound level limits at several of the proposed residential receptors; therefore, noise mitigation measures are required. See Section 7.0 and Table 3 for details.

4.2 Stationary Sources

Noise Sources External to Proposed Development

Existing Residential Highrise Buildings southwest of Dixie Road

Based on our site visits conducted July 23, 2025, the separation distances, and the generally high ambient sound levels set by road traffic on Dixie Road, the mechanical equipment associated with the existing residential buildings located southwest of Dixie Road are not expected to exceed the MECP guidelines and noise mitigation measures are not required.

Rockwood Mall

As mentioned in Section 2.2, this commercial development is located to the south of the proposed site. The Food Basics store is located at the northwest corner of the mall with two (2) partially enclosed loading docks (walls and roof but no doors) oriented in a northerly direction. There is a parking lot between the mall building and Rathburn Road East.

The main noise sources associated with the Rockwood Mall building are rooftop mechanical units, particularly the rooftop refrigeration fans of the Food Basics store, and the truck operations at the loading docks and within the parking lot between Rathburn Road East and the mall.

Based on the questionnaire (see Appendix F) and information provided by the Food Basics store, truck deliveries occur only between 7:00 a.m. and 9:00 p.m. It was advised that there are two loading docks on the north side of the building but just one is used for delivery operations and only one truck can be unloaded at any given time. However, other trucks can be parked at the north parking area waiting to be unloaded. The majority of the trucks associated with the store are refrigerated tractor-trailers with the refrigeration units operating when trucks are parked at the loading bay and at the parking lot.

Our analysis includes a refrigerated truck route with two (2) trucks per hour during daytime and evening hours entering and exiting the parking lot. One (1) of the refrigerated trucks will be parked inside of the partially enclosed loading bay, where the truck-mounted refrigeration unit will operate continuously for one (1) hour during loading/unloading. The other refrigerated truck will be parked in the parking lot, where the truck-mounted refrigeration unit will operate

continuously for thirty (30) minutes. In both cases, the trucks themselves will be idled for only three (3) minutes, in accordance with the City of Mississauga's idling bylaw. Our analysis also included the rooftop mechanical equipment associated with the Food Basics store. Duty cycle of 100% during daytime and evening hours and 50% during nighttime hours were assumed based on information previously collected for similar facilities.

The sound level information and duty cycle information for the noise sources modelled are based on the information collected through the previous site investigations and information from Jade Acoustics Inc. files, unless otherwise specifically noted.

Impulsive noise from loading/unloading activities at the Food Basic store has been evaluated separately from continuous noise sources, in accordance with NPC-300.

Existing 20-Storey Apartment Building located west of the proposed building

Based on our site visit conducted on July 23, 2025, the noise sources associated with the existing apartment building located within the proposed site include:

- four (4) pieces of rooftop mechanical equipment (heat/cool units);
- cooling tower on top of the mechanical penthouse where the chiller room is located;
- two (2) louvre openings where the chiller room is located; and
- two underground exhaust shafts with two (2) garage exhaust fans on each shaft.

At the time of the site visit, sound measurements and information on the make and model of the noted equipment were collected, except for the garage exhaust fans due to site conditions. The collected sound measurement data was used in the analysis.

For the cooling tower, sound measurement data was used to calculate the sound power level. As the sound measurement was taken during the July 23, 2025 site visit, it may not consider to be the worst-case scenario. Therefore, 5 dB was added to the sound power level and was used in the analysis.

For the existing garage exhaust fans, two fans were observed on each shaft. The make and model of these fans were obtained from the mechanical drawings referenced in Section 1.0. Sound rating data provided in the manufacturer datasheet was used for the garage exhaust fans in the analysis.

Existing 11-Storey Residential Building located at 1500 Grazia Court

Based on our site visit conducted on February 26, 2026, the noise sources associated with this existing residential building include:

- a chiller and a make-up air unit on the rooftop; and
- two underground exhaust shafts with a single garage exhaust fan on each shaft.

At the time of the site visit, sound measurements and information on the make and model of the noted equipment were collected, except for the chiller due to site conditions. The collected sound measurement data was used in the analysis.

As for the chiller, sound rating data provided in the manufacturer datasheet was used in the analysis. Additionally, the building staff advised that the chiller operate at 50% load during very hot days and at a lower load during nighttime. To be conservative, sound power level associated with 50% load was used for all time periods (daytime, evening and nighttime) in the analysis.

For the make-up air unit, it was advised by the building staff that it operates at all times. 100% duty cycles for all time periods were used in the analysis.

In addition to the noise sources noted above, there are other mechanical equipment identified during the site visit considered to be acoustically insignificant due to the shielding of the mechanical penthouse itself as well as other rooftop structures such as rooftop parapets.

The Beechwood Retirement Residence located at 1500 Rathburn Road East

Contact was attempted with The Beechwood Retirement Residence; however, no response was received at the time of completion of this noise report. Based on photos taken during the site visits and publicly available online information, the primary potential noise sources identified include a chiller and two (2) make-up air units located on the rooftop, which appear to be similar in size to the chiller and make-up air unit on the existing 11-storey residential building located at 1500 Grazia Court. Other potential noise sources associated with The Beechwood Retirement Residence were considered acoustically insignificant due to setback distance and/or existing screening. The Beechwood Retirement Residence is expected to achieve Class 1 sound level compliance at nearby existing residential receptors, particularly the existing building at 1500 Grazia Court, located west of Rathburn Road East and north of Bough Beeches Boulevard. On this basis and given the similar equipment sizes to those analyzed for the existing building west of Rathburn Road and north of Bough Beeches Boulevard, the same sound power level data and duty cycles were used in the analysis for the chiller and make-up air units.

Appendix D includes information regarding the noise sources modelled, associated sound power levels and duty cycles used in the calculations.

Back-up beepers associated with trucks are exempt from the MOE guidelines as they are safety devices; therefore, they were not included in the analysis.

Figures 5A and 5B show the location of the stationary source developments and noise sources analyzed.

Since the proposed development is at some distance away from Dixie Road such that the ambient sound levels are not expected to exceed the exclusion limits, the predicted sound levels due to the stationary sources were compared with the MECP exclusion sound level limits of 50 dBA (daytime and evening hours) and 45 dBA (nighttime hours) to assess compliance with the Class 1 requirements.

The unmitigated sound levels due to the stationary sources in terms of one-hour Leq were calculated for the façades (and relevant outdoor amenity areas) of the proposed building using the CadnaA 2025MR1 computer program, which uses International Standard Analytical Code ISO 9613-2 (1996).

Screening from the existing 20-storey apartment building located west of the subject site has been included in the preliminary analysis at this time.

As mentioned above, impulsive noise associated with loading/unloading activities at the Food Basic store has been evaluated separately from continuous noise sources.

Figure 6 shows the predicted unmitigated sound levels due to continuous and impulsive (analyzed and shown separately) stationary noise sources at all building façades and private/common outdoor amenity spaces.

As shown in Figure 6, the unmitigated sound levels due to the continuous noise sources as well as impulsive noise sources associated with the stationary sources are predicted to be within the MECP Class 1 exclusion sound level limits at all of the noise sensitive receptors within the proposed development. Therefore, noise mitigation measures are not required.

5.0 IMPACT OF THE DEVELOPMENT ON THE ENVIRONMENT

Detailed plans and design information for the subject development are not available at this stage of the project. Once all plans and designs have been advanced, the analysis of the subject site can be revisited.

In general, the main sources of noise of potentially adverse impact on sensitive land uses due to the development include, but may not be limited to, loading areas and mechanical/electrical equipment (potentially including air conditioning equipment, an emergency generator, transformers, garage exhaust fans, etc.).

Noise from garbage pick-up and moving operations are of short duration and generally do not warrant special mitigative measures. As an administrative control measure, garbage collection and moving operations would need to be limited to the daytime hours between 7:00 a.m. and 7:00 p.m.

Mechanical equipment should comply with the requirements of the Ontario Ministry of the Environment, Conservation and Parks Publication NPC-300. These criteria require that the noise from a stationary source not exceed the applicable sound level limits, in any one-hour period.

There are existing sensitive land-uses located immediately north, east, and west of the proposed residential building.

The noise from the mechanical equipment proposed for this development should be addressed when information becomes available. With appropriate mitigation, it is feasible to meet the applicable sound level limits at the existing noise sensitive receptors.

6.0 IMPACT OF THE DEVELOPMENT ON ITSELF

When evaluating the potential effect of the development on itself, consideration must be given to the control of air-borne and structure-borne noise generated within the building itself. The areas to be investigated are the common boundaries both vertically and horizontally, between suites; between suites and recreational spaces; and between suites and mechanical areas.

The performance of a boundary with respect to air-borne noise is measured in terms of Sound Transmission Class (STC). This is an approximation of the amount of sound reduction provided by the boundary. The Ontario Building Code (OBC) requires a minimum acoustic performance rating between residential dwelling units and between dwelling units and areas within which noise may be generated. This includes construction between residential units and elevator shafts and garbage chutes.

Consideration should be given to the noise impact at the residential suites in the vicinity of potentially noisy areas (e.g., garbage room, loading bays, mechanical rooms, indoor amenity spaces). Special sound isolation construction may be required to adequately mitigate the potential noise impact. The incorporation of secondary sound isolation ceilings, floating floors, or cavity walls are some examples. With a sound isolation ceiling, structural clearance may have to be increased to maintain ceiling height.

When addressing structure-borne noise, impact sounds are evaluated using the Impact Insulation Class (IIC) rating system. This system is configured in the same format as the STC rating system to allow for easier comparison when evaluating the acoustical performance of a partition. The National Building Code and the Ontario Building Code do not specify a minimum IIC rating for impact sound isolation. To ensure that impact sounds are not a problem, consideration should be given to the performance of the floor/ceiling systems, particularly when unlike spaces are stacked vertically, during the design process.

All of these items should be evaluated prior to issuance of building permits. An assessment of these items is not part of the scope of this report.

Noise from garbage pick-up is of short duration and generally does not warrant special mitigation measures.

Also, the noise from the mechanical and electrical equipment associated with the proposed development should be addressed when drawings/information becomes available.

The mechanical and electrical systems (such as, but not limited to, garage exhaust fans, emergency generator and roof mounted air conditioning equipment) must be designed to comply with the applicable sound level limits at the exterior face of the proposed building where windows and exterior doors will be located, as well as at any outdoor amenity space. With appropriate mitigation, it is feasible to meet the applicable sound level limits at the noise sensitive receptors within the subject site.

7.0 NOISE MITIGATION REQUIREMENTS

The noise mitigation requirements for both the indoor and outdoor locations are detailed below. Table 3 provides a summary of the noise mitigation requirements for the proposed residential building.

7.1 Transportation Sources

7.1.1 Indoors

As required, indoor sound level criteria for road traffic can be achieved in all cases by using appropriate architectural elements for exterior walls, windows, exterior doors, and roof construction. The indoor limit for road traffic noise is 40 dBA for the bedrooms during nighttime hours, 45 dBA for the living/dining rooms during nighttime hours and 45 dBA for the living/dining rooms and bedrooms during daytime hours. These criteria have been used in this report. The characteristic spectra for the noise sources have been accounted for in the determination of the architectural components. Appendix E contains a sample calculation of the architectural component selection.

Based on the analysis, the difference between the predicted daytime and nighttime sound levels exceeds 5 dBA. Considering that the difference between the daytime and nighttime indoor sound level limits is 5 dBA, the predicted daytime sound levels represent the worst-case scenario for the assessment of architectural component requirements.

In determining the architectural requirements, the corner living/dining rooms and bedrooms with exposure to the road traffic on Rathburn Road East and Bough Beeches Boulevard are the worst-case noise sensitive receptors. As no detailed architectural plans are available at this time, both exterior walls of the corner bedroom were assumed to be 20% of the associated floor area. The windows/exterior doors were assumed to be installed in both walls and have the surface area equal to 60% of the associated floor area each.

Based on the analysis, standard exterior window/door and exterior wall construction is acoustically acceptable for all residential units. Appendix E includes a sample calculation for the analyzed worst case location.

The acoustical performance of windows and exterior doors as a whole depends on glass configuration/thickness, air space, material used for frames and construction details including seals. Therefore, the acoustical performance of the glass configuration alone expressed as a sound transmission class (STC) rating, generally available in the literature, does not address the STC rating of the whole window and exterior door. Same glass configurations with different frame materials and/or construction details often produce different STC ratings. Therefore, it is recommended that prior to installation, STC test results of window and exterior door

configurations from an accredited laboratory be provided to ensure that the selected windows and exterior doors meet the required STC ratings.

Since detailed architectural plans are not yet available, the final architectural choices cannot be made. Once plans become available, the noise control requirements should be re-evaluated to determine the final requirements.

Based on the exposure to road traffic noise, provision for adding central air conditioning and warning clauses are required for all proposed residential units. Based on the nature of the proposed residential building being high-rise, it is anticipated that the building will be provided with central air conditioning, thereby satisfying these requirements.

See Table 3 and Figure 2 for a summary of minimum noise mitigation measures.

Warning clauses will also be required to be placed in a registerable portion of the condominium and/or rental agreement and to be included in agreements of purchase and sale or lease agreements for all residential units to make future occupants aware of the potential noise situation. See Table 3 for details.

7.1.2 Outdoors

The outdoor amenity area is required to be exposed to a sound level of less than or equal to 55 dBA during the day. A 5 dBA increase is considered acceptable in certain situations. Typically, if the sound level is above 55 dBA, some form of mitigation and a warning clause is required.

For the at-grade common outdoor amenity area, a 2.0 m high acoustic barrier along the south and east limits of the outdoor amenity area would be required to achieve a predicted mitigated sound level of 55 dBA.

Further to the comment provided by the City of Mississauga (see Section 1.0), we have investigated several options involving the reduced length of a 2.0 m high acoustic barrier resulting in mitigated sound levels higher than 55 dBA but less than 59 dBA. As a mitigated sound level of 55 dBA is not achieved with the sound barrier modifications suggested in the City's comment and the unmitigated sound level is predicted to be 59 dBA, which is within an acceptable range of 5 dBA mentioned above, an acoustic barrier for the at-grade common outdoor amenity area is not proposed. From an urban design perspective, this is the preferred recommendation. A warning clause to be included in the tenant agreements has been added in Table 3 and Notes to Table 3.

As noted in Section 4.1, private balconies and elevated terraces associated with the proposed high-rise building were not considered to be OLA since the common at-grade outdoor amenity area is provided and accessible to all occupants of the proposed building. On the basis that the guidelines (in the context of addressing transportation noise) require that one (1) common outdoor amenity area, accessible to all occupants, be provided for the high-rise development, other common outdoor amenity areas have not been included in the assessment.

Generally, if a sound barrier is to be used, the sound barrier may be a fence, made of any one or a combination of various materials, berm, or a berm/fence combination. The sound barrier should be of continuous construction, with no gaps and should have a minimum surface density of 20 kg/m^2 or more. Appropriate treatment of the sound barrier at all discontinuities and points of termination would be required to ensure that the sound barrier is effective. An acoustic gate of 20 kg/m^2 is very heavy. Therefore, if a gate is required, provided that it is of continuous construction with no gaps between the boards, it may have a surface density of between 10 kg/m^2 and 20 kg/m^2. In addition, any gaps at the bottom of the gate should be kept to a minimal height.

Note that any openings under the acoustic fence for drainage must be kept to a minimum. If drainage under the acoustic fence is intended, an acoustical engineer should be consulted.

Note that there are two private terraces over 4 m in depth which are considered to be OLAs in the context of addressing stationary noise. These OLAs were evaluated and discussed in Section 7.2.

7.2 Stationary Sources

As discussed in Section 4.2, there are existing residential and commercial uses in proximity of the proposed building. The stationary noise sources associated with these uses do not exceed the MECP Class 1 noise guidelines at the proposed development. Therefore, mitigation measures are not required.

As previously noted, detailed information regarding the proposed building's mechanical equipment is not yet available. Mitigation measures to address the proposed mechanical equipment may include, but may not be limited to acoustic louvres, silencers, and acoustic barriers. Once the detailed mechanical design has been prepared, an acoustical analysis will need to be prepared to ensure the applicable noise criteria are achieved. This detailed review should be conducted prior to the building permit stage.

A proximity warning clause advising that the sound generated by the mechanical and other equipment, and operations associated with the adjacent residential/retirement buildings and commercial development may at times be audible, would be required for all proposed residential units.

8.0 RECOMMENDATIONS

1. The requirements as stipulated in Table 3 should be incorporated into the proposed development.

2. A detailed environmental noise report should be prepared once the final site plan, grading plans, and architectural and mechanical drawings are available to ensure that the appropriate criteria are achieved.

3. An updated analysis and detailed review are to be prepared with respect to the proposed mechanical systems in advance of issuance of any building permits, once detailed mechanical design information for the proposed development becomes available.

4. Prior to the issuance of building permits, the architectural drawings should be reviewed by a qualified acoustical consultant to ensure compliance with the applicable guidelines.

5. For residential units, demising partitions (floors and walls) must comply with the minimum requirements of the OBC. These OBC requirements are applicable for the separating construction between residential units, or between residential units and spaces in which noise may be generated. OBC acoustic requirements also apply to the separating construction between residential units and an elevator shaft or garbage chute.

6. All air conditioning units, rooftop mechanical equipment and other sources, such as garage exhaust fans, air handling units and emergency generator interfacing with the outside environment must be designed to meet the MECP noise guideline limits in NPC-300. This can be achieved by determining mitigative measures such as silencers and location of equipment based on the acoustical ratings provided for each piece of equipment by the manufacturers.

9.0 CONCLUSION

Based on the acoustical analysis, with the incorporation of the appropriate noise mitigation measures, the sound levels are expected to be within the applicable noise guidelines. In accordance with the City of Mississauga, Region of Peel and Ontario Ministry of Environment, Conservation and Parks guidelines, where mitigation is required, future occupants will be advised through the use of warning clauses.

Once the final site plan, grading plans, and architectural and mechanical drawings are available, a detailed environmental noise report would need to be prepared to ensure that the applicable guidelines can be achieved.

Respectfully submitted,

JADE ACOUSTICS INC.

Per: _____
Davor Sikic, P.Eng.



Per: _____
Chris B. Kellar, P.Eng.



DS/CK/jg
L:\Reports\05-070 Jun 29-26 Dixie Road and Rathburn Road East (Revised PENR).docx

10.0 STATEMENT OF LIMITATIONS

This document has been prepared by Jade Acoustics Inc. (Jade) for the client identified on the cover page, exclusively for the agreed-upon purpose set out in the report. The information used in the preparation of this report should not be used in whole or in part for any other project without written authorization from Jade. Copying or distribution of this document (or excerpts of this document), except by the intended client, is not permitted without the express written consent of Jade.

Jade accepts no responsibility for any liability, loss, or damages suffered by any third party which uses the information, results or conclusions in this report. Jade acknowledges that this report may be provided to the relevant regulatory authorities as part of the approvals process.

The material in this report reflects Jade's professional judgment based on the information available to Jade at the time of preparing this report. The recommendations and conclusions in this report are based on the information provided at the time of the preparation of this report, as detailed within the report. The client should review the information used in the preparation of the report to ensure that it is accurate.

Jade assumes that information provided by third parties is accurate and without error unless it is manifestly incorrect. Jade is not responsible for updating the report to reflect changes to information subsequent to the production of this report which may affect the conclusions and recommendations in the report unless explicitly instructed by the client.

Jade is not qualified to advise with respect to any matters not related to acoustics. Jade is not liable for any failure to implement the recommendations outlined in the report or resulting repercussions.

11.0 REFERENCES

1. “Model Municipal Noise Control By-Law”, Final Report, by the Ontario Ministry of the Environment, August, 1978.

2. “ORNAMENT – Ontario Road Noise Analysis Method for Environment and Transportation", Ontario Ministry of the Environment, October, 1989.

3. "Building Practice Note No. 56: Controlling Sound Transmission into Buildings”, by J.D. Quirt, Division of Building Research, National Research Council of Canada, September, 1985.

4. "General Guidelines for the Preparation of Acoustical Reports in the Region of Peel", November, 2012 (updated August 2020).

5. “Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning”, Ontario Ministry of the Environment, Publication NPC-300, August, 2013, released October 21, 2013, (updated final version # 22).

6. “Impulse Vibration in Residential Buildings”, Ontario Ministry of the Environment, Publication NPC-207 (Draft), November, 1983.

7. City of Mississauga Noise Control By-law Number 0360-1979, Amended by 0077-1985, 1298-1986, 0755-1987, 0063-1992, 0230-1994, 0303-2000, 0495-2003, 0124-2005, 0110-2006, 0092-2007, 0120-2007, 0127-2007, 0248-2007, 0073-2008, 0099-2008, 0299-2008, 0325-2009, 0243-2013, 0043-2015, 0060-2015, 0120-2017, 0125-2018, 0166-2020, 0188-2020, 0192-2020, 0238-2020, 0245-2021), January 28, 1980.

8. City of Mississauga Nuisance Type Noise By-Law Number 0785-1980 (amended by By-laws 0226-1982 and 0062-1992), October 15, 1980.

9. City of Mississauga Official Plan-Part 2, Section 6 “Value the Environment”, April 8, 2021.

TABLE 1

PROPOSED RESIDENTIAL DEVELOPMENT

DIXIE ROAD AND RATHBURN ROAD EAST

CITY OF MISSISSAUGA

SUMMARY OF TRAFFIC DATA

A. ROAD TRAFFIC

ROAD	DIXIE ROAD	RATHBURN ROAD	BOUGH BEECHES BOULEVARD
AADT* (2036)	48,600 (ultimate)	25,700*	4,563
No. of Lanes	6	4	2
Speed (km/h)	60	50	40
Medium Trucks (%)	1.6%** (1.6%***)	1.65	0.34
Heavy Trucks (%)	5.6%** (4.3%***)	1.35	0.21
Gradient (%)	1	1	1
Day/Night Split (%)	88/12	90/10	90/10****

* AADT: Annual Average Daily Traffic.

** Daytime

*** Nighttime

**** Assumed

B. AIRCRAFT TRAFFIC

Toronto Pearson International Airport	NEP <25 NEF <25

NEP: 1996 Noise Exposure Projection

NEF: 2000 Noise Exposure Forecast

TABLE 2

PROPOSED RESIDENTIAL DEVELOPMENT

DIXIE ROAD AND RATHBURN ROAD EAST

CITY OF MISSISSAUGA

SUMMARY OF PREDICTED SOUND LEVELS OUTDOORS DUE TO ROAD TRAFFIC

Building**	Location**	Source	Leq (dBA)*			
			Day Separate	Day Combined	Night Separate	Night Combined
Proposed High-rise Building	South Façade	Dixie Road	58	64	52	57
		Rathburn Road East	62		56	
		Bough Beeches Boulevard	42		35	
	At-grade common OLA	Dixie Road	49	59	--	--
		Rathburn Road East	58		--	
		Bough Beeches Boulevard	50		--	

* Predicted sound levels represent the worst-case location on the building with respect to the combined impact of all roadway sources and may not represent the worst-case location due to each respective roadway.

** Building/location naming convention is as shown on Figures 2, 4A and 4B.

TABLE 3

PROPOSED RESIDENTIAL DEVELOPMENT

DIXIE ROAD AND RATHBURN ROAD EAST

CITY OF MISSISSAUGA

SUMMARY OF MINIMUM NOISE MITIGATION MEASURES

Location	Air Conditioning(1)*	Exterior Wall(2)**	Window(2)***	Sound Barrier(3)	Warning Clause(4)
Proposed High-rise Building	Provision for Adding	Standard#	Standard#	No##	A, B, C, D

* It is anticipated that all dwelling units will be provided with central air conditioning.

** Based on preliminary calculations. See Section 7.1.1 for details.

*** Based on preliminary calculations. See Section 7.1.1 for details.

Standard construction practices which satisfy the non-acoustic requirements of the Ontario Building Code. For high-rise construction, exterior wall construction is anticipated to achieve a minimum of STC 38 and exterior windows and doors are anticipated to achieve a minimum of STC 28.

As the unmitigated sound level at the at-grade common outdoor amenity area is predicted to be 59 dBA, an acoustic barrier is not mandatory and, as such, not proposed. See Section 7.1.2 for details.

See Notes to Table 3 on following pages.

NOTES TO TABLE 3

1. Means must be provided to allow windows to remain closed for noise control purposes. The air conditioning system should be designed to meet the MECP NPC-300 noise guideline limits.

2. STC - Sound Transmission Class Rating (Reference ASTM-E413). Values shown are based on preliminary calculations using the standard assumptions. See Section 7.1.1 for details.

3. STC - Sound Transmission Class Rating (Reference ASTM-E413). Values shown are based on preliminary calculations using the standard assumptions. See Section 7.1.1 for details. A sliding glass walkout door and exterior doors having glass components should be considered as a window and be included in the percentage of glazing.

4. Suggested warning clauses to be included in the development agreement and to be included in offers of purchase and sale or lease agreements on designated residential units:

   A. "Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the occupants as the sound levels exceed the sound level limits of the Municipality and the Ontario Ministry of the Environment, Conservation and Parks. I, the purchaser hereby, agree to place this clause in all subsequent offers of purchase and sale when I sell the property."

   B. "Purchasers/tenants are advised that despite the inclusion of noise control features in this development area and within the dwelling units, noise due to increasing road traffic may continue to be of concern, occasionally interfering with the activities of the occupants as the sound level may exceed the noise criteria of the Municipality and the Ontario Ministry of the Environment, Conservation and Parks. I, the purchaser hereby, agree to place this clause in all subsequent offers of purchase and sale when I sell the property."

   C. “Purchasers/tenants are advised that the residential unit is fitted with a central air conditioning system in order to permit closing of windows for noise control.”

   D. “Purchasers/tenants are advised that the residential unit is in proximity to the existing commercial facilities and/or high-density residential uses whose activities and/or equipment may at times be audible.”

6. A conventionally ventilated attic roof construction meeting the standard requirements is satisfactory in all cases (applicable to the proposed townhouse units).



N.T.S

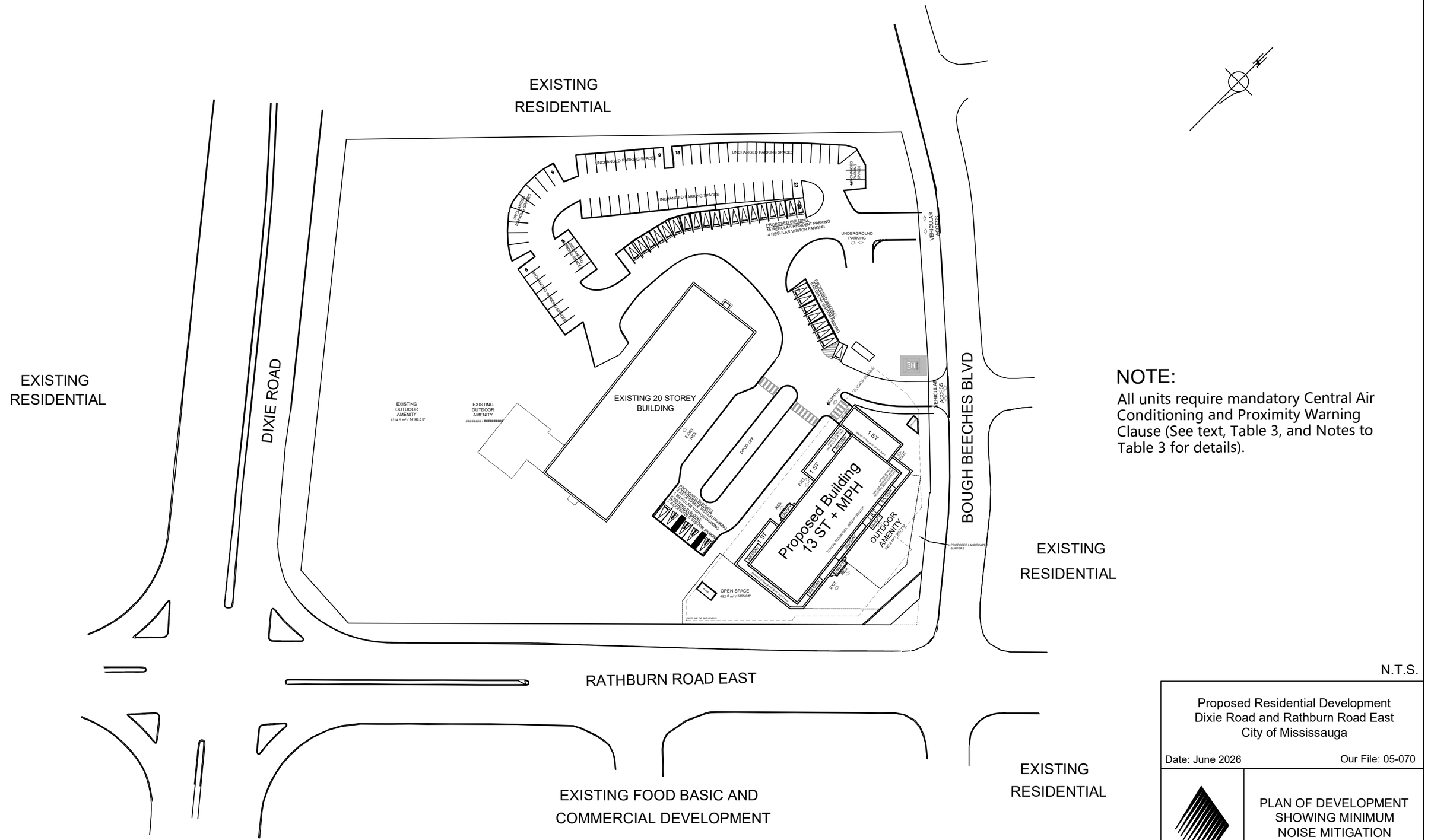
Proposed Residential Development
Dixie Road and Rathburn Road East
City of Mississauga

Date: June 2026 **File: 05-070**

KEY PLAN

FIGURE 1

JADE ACOUSTICS



NOTE:

All units require mandatory Central Air Conditioning and Proximity Warning Clause (See text, Table 3, and Notes to Table 3 for details).

N.T.S.

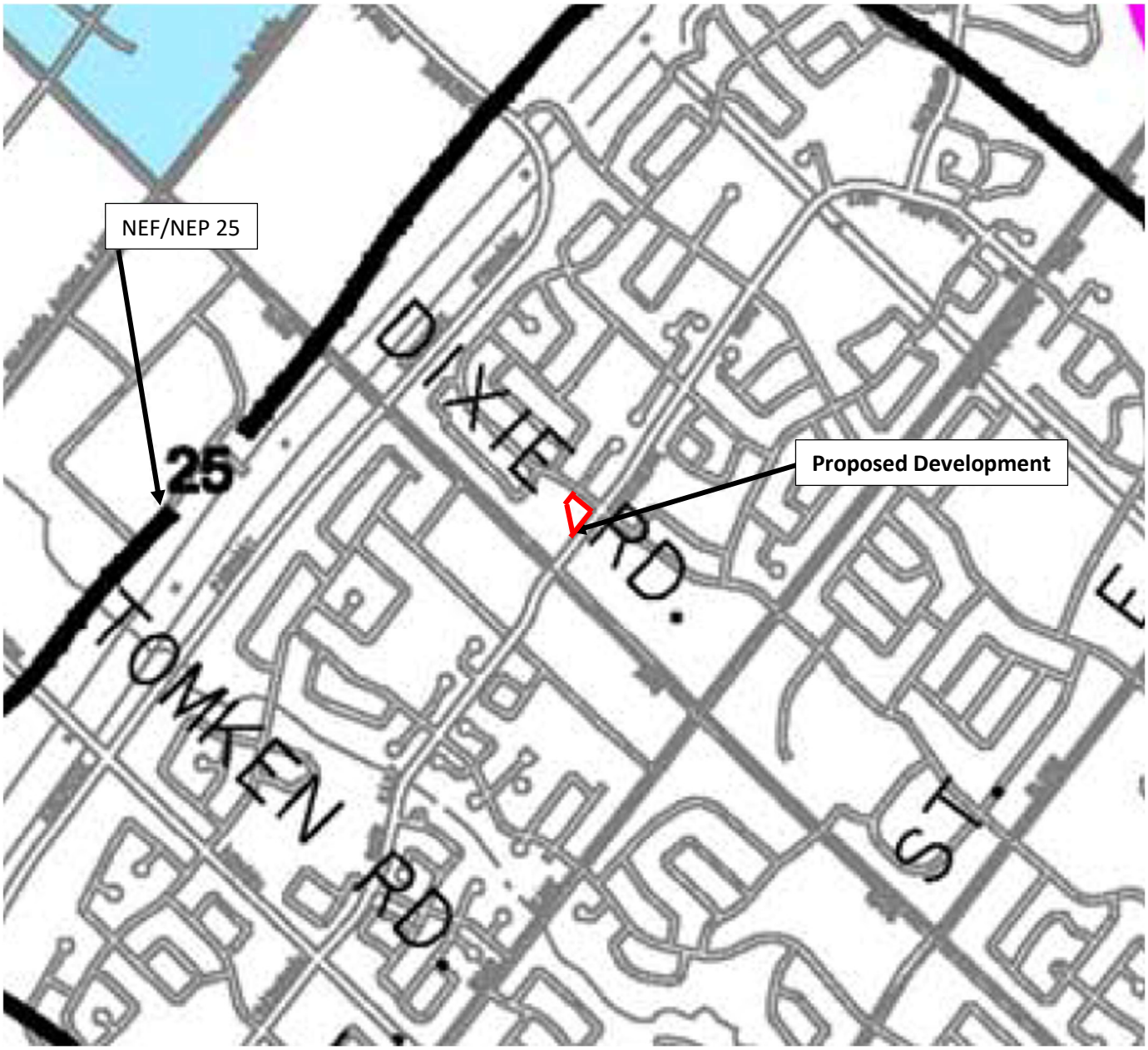
Proposed Residential Development
Dixie Road and Rathburn Road East
City of Mississauga

Date: June 2026 Our File: 05-070

JADE ACOUSTICS

PLAN OF DEVELOPMENT
SHOWING MINIMUM
NOISE MITIGATION
MEASURES

FIGURE 2



N.T.S.

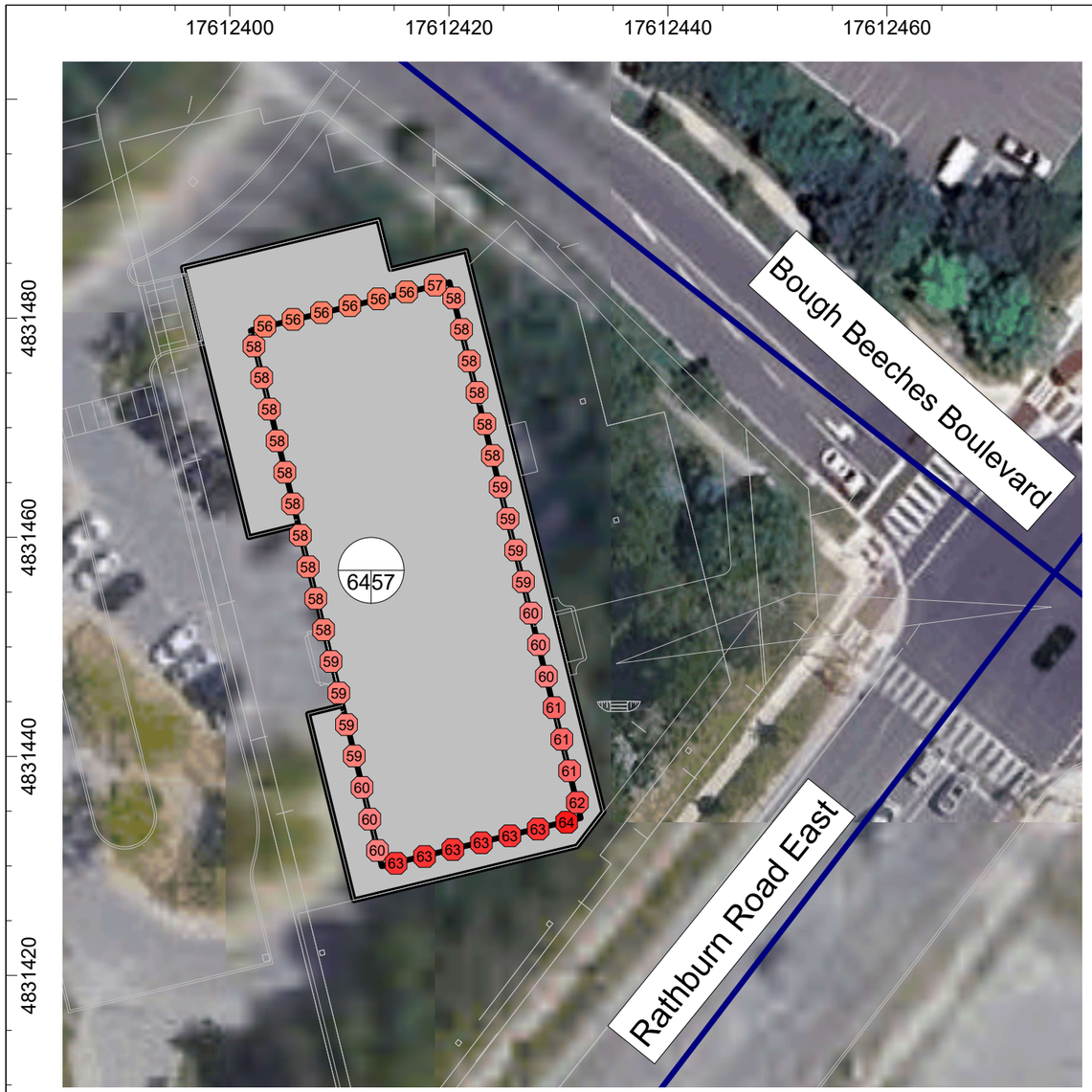
Proposed Residential Development
Dixie Road and Rathburn Road East
City of Mississauga
Region of Peel

TORONTO PEARSON INTERNATIONAL AIRPORT OPERATING AREA AND COMPOSITE NOISE CONTOURS

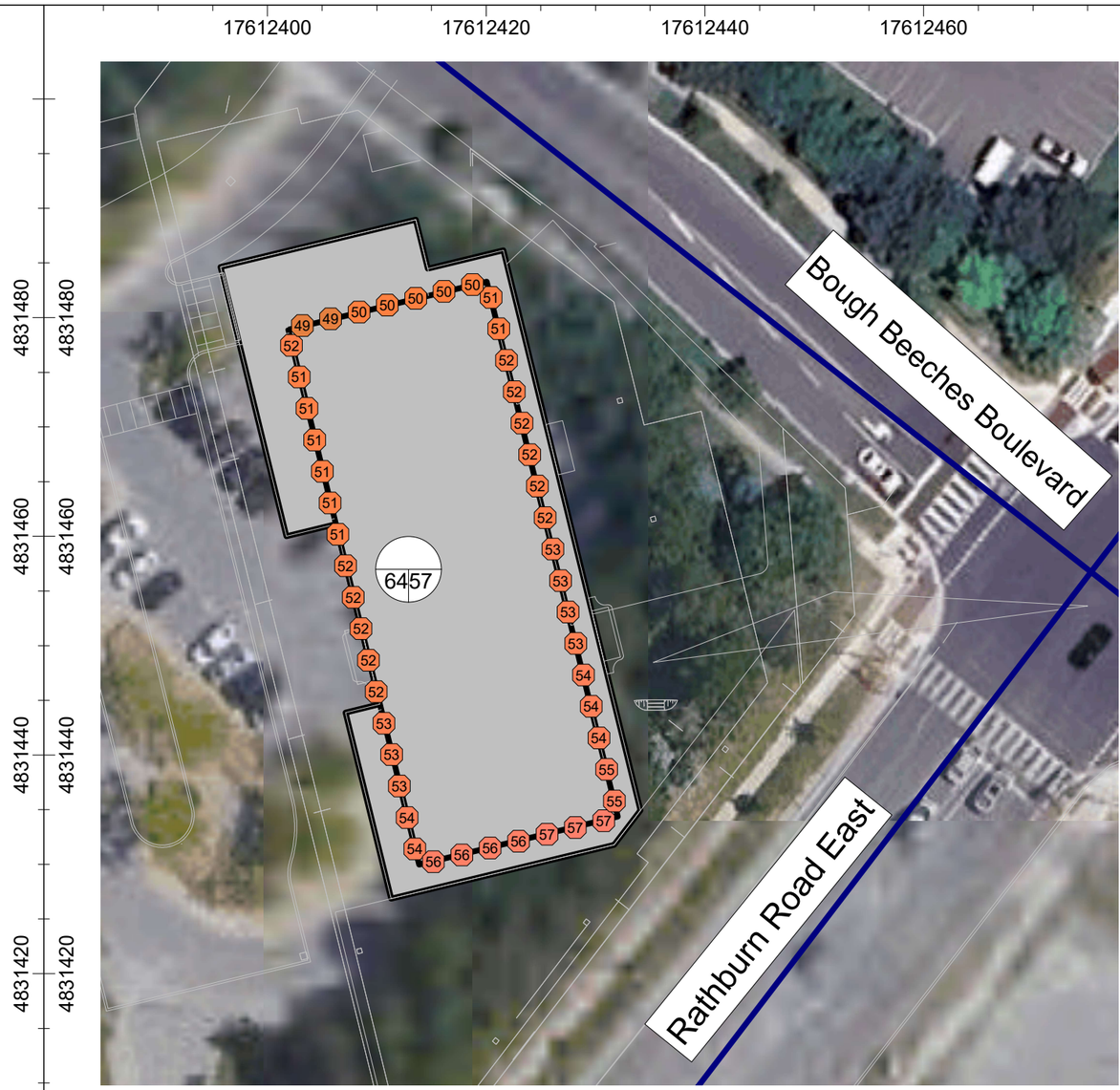
JADE ACOUSTICS

Date: June 2026 **File: 05-070**

FIGURE 3



Daytime (7:00 a.m. to 11:00 p.m.)



Nighttime (11:00 p.m. to 7:00 a.m.)

JADE ACOUSTICS

Jade Acoustics Inc.
411 Confederation Parkway
Unit 19
Concord, Ontario L4K 0A8
Tel: 905-660-2444
Fax: 905-660-4110

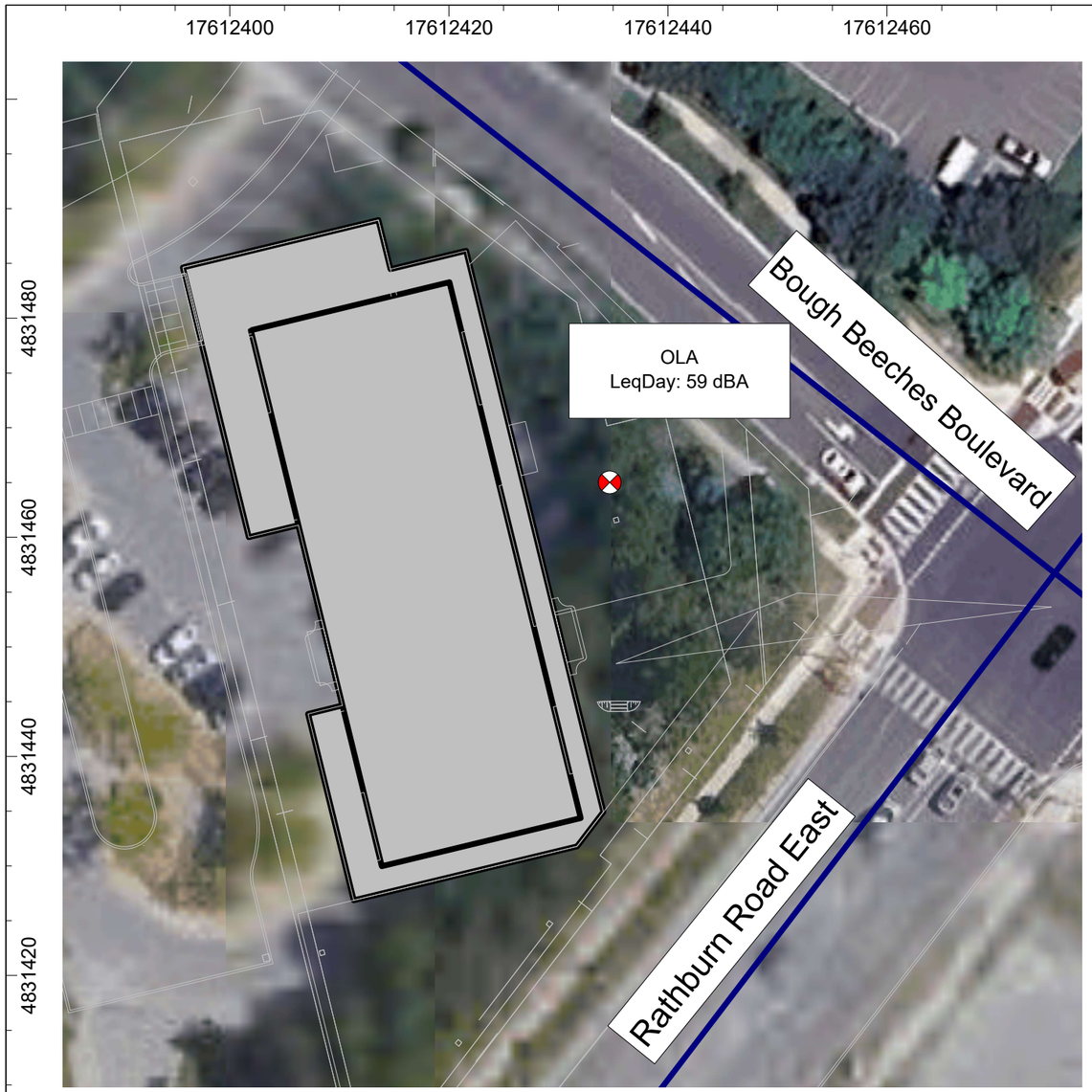
Date: June 2026

Jade File: 05-070

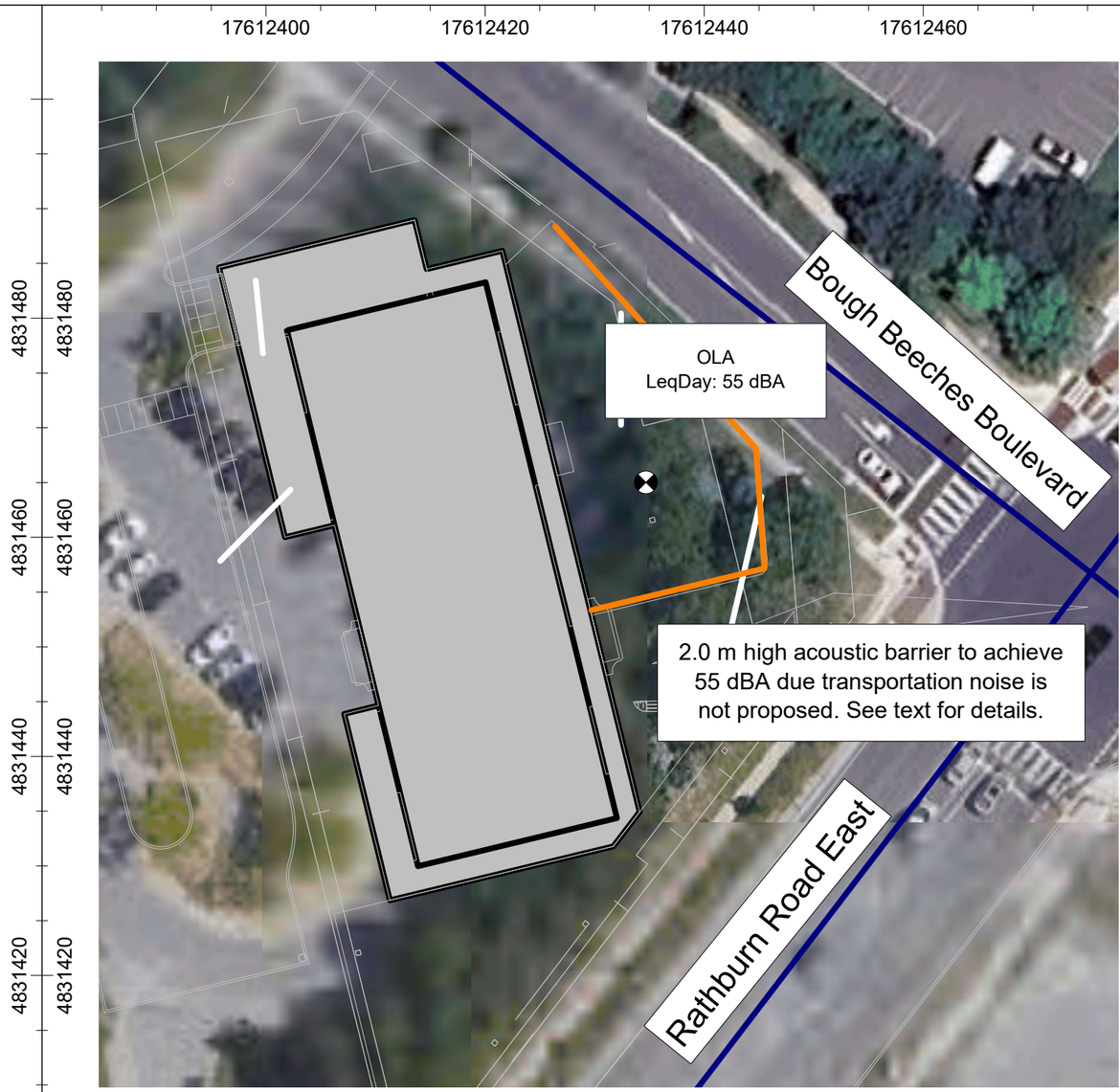
PROPOSED RESIDENTIAL DEVELOPMENT
DIXIE ROAD AND RATHBURN ROAD EAST
CITY OF MISSISSAUGA

PLAN SHOWING ANALYZED SOURCES OF ROAD NOISE AND PREDICTED FACADE SOUND LEVELS WITHOUT MITIGATION MEASURES

FIGURE 4A



Daytime (7:00 a.m. to 11:00 p.m.) - Without Mitigation Measures



Daytime (7:00 a.n. to 11:00 p.m.) - With 2.0 m High Acoustic Barrier

JADE ACOUSTICS

Jade Acoustics Inc.
411 Confederation Parkway
Unit 19
Concord, Ontario L4K 0A8
Tel: 905-660-2444
Fax: 905-660-4110

Date: June 2026

Jade File: 05-070

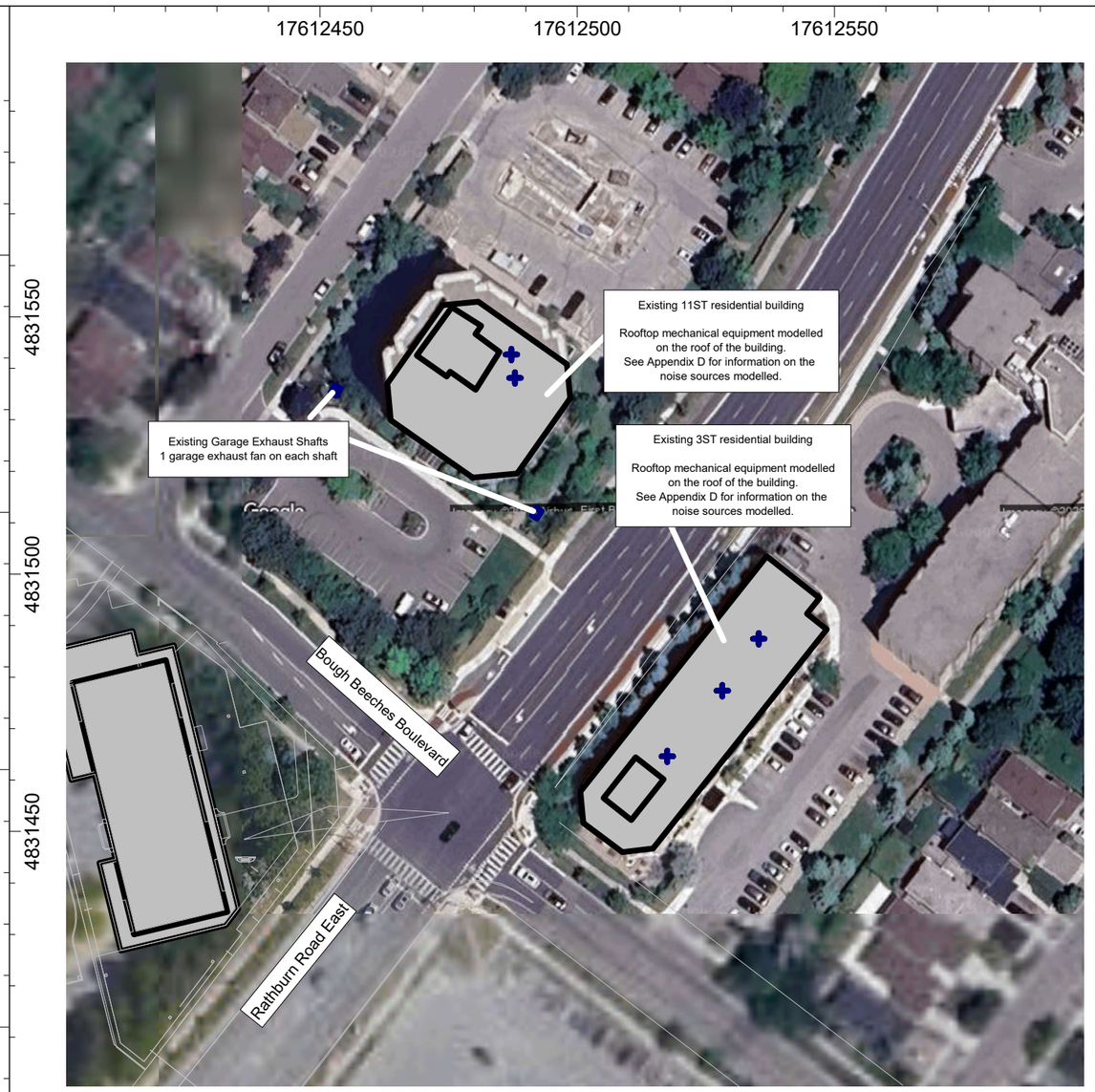
PROPOSED RESIDENTIAL DEVELOPMENT
DIXIE ROAD AND RATHBURN ROAD EAST
CITY OF MISSISSAUGA

PLAN SHOWING ANALYZED SOURCES OF ROAD NOISE AND PREDICTED OUTDOOR LIVING AREA SOUND LEVELS

FIGURE 4B



Existing 20ST apartment building to the east



Existing residential buildings east of Bough Beeches Blvd

JADE ACOUSTICS

Jade Acoustics Inc.
411 Confederation Parkway
Unit 19
Concord, Ontario L4K 0A8
Tel: 905-660-2444
Fax: 905-660-4110

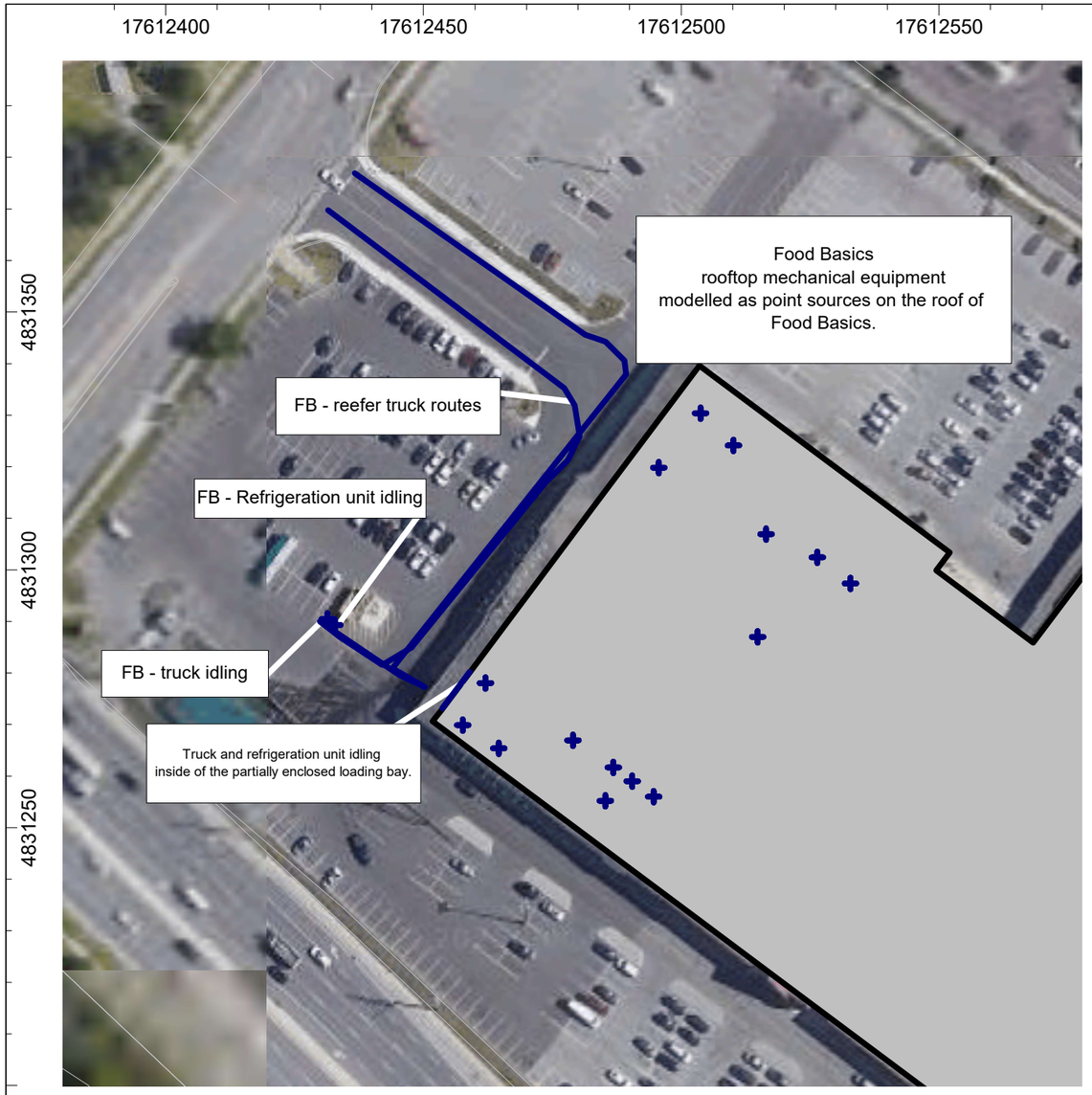
Date: June 2026

Jade File: 05-070

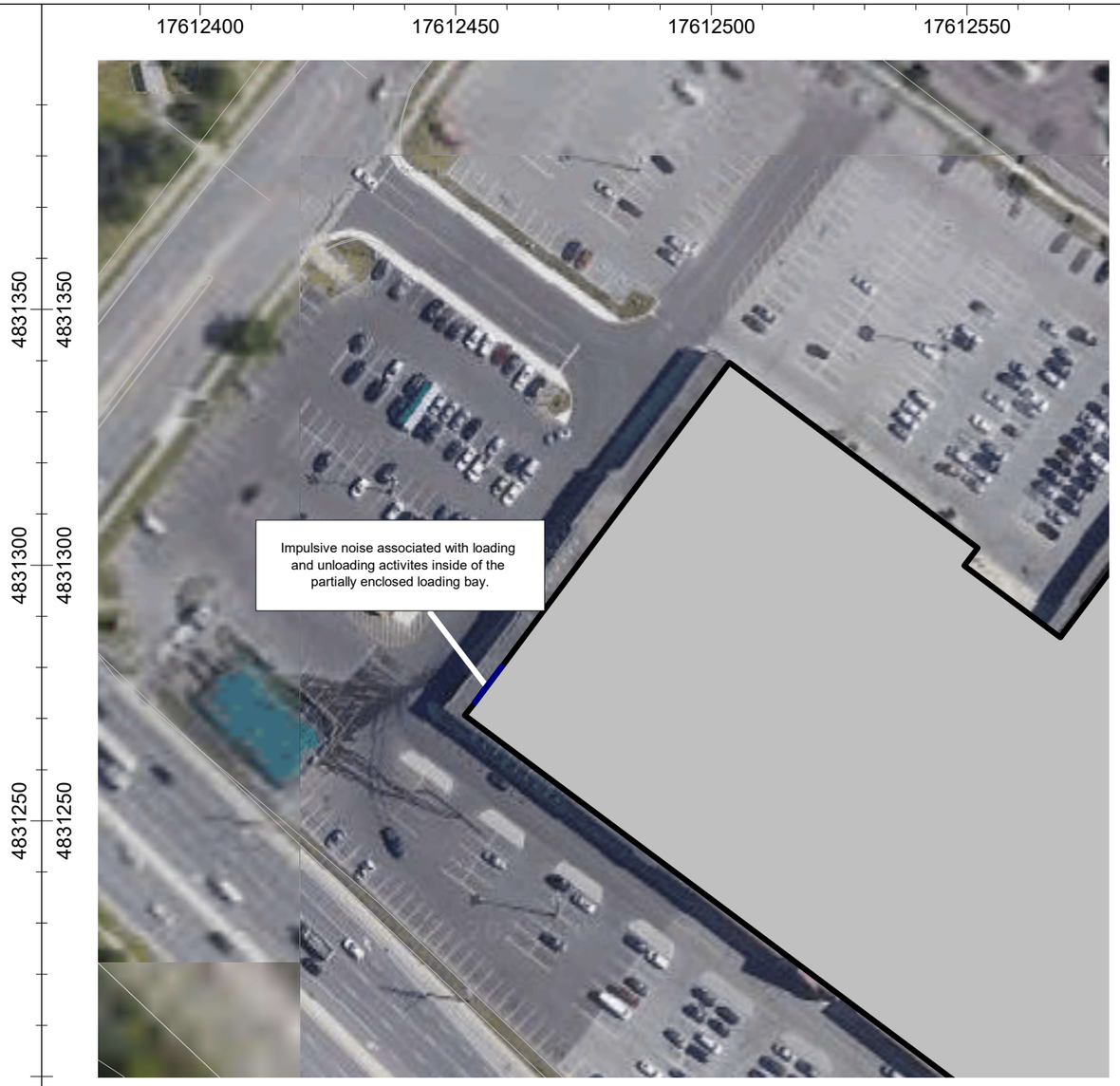
PROPOSED RESIDENTIAL DEVELOPMENT
DIXIE ROAD AND RATHBURN ROAD EAST
CITY OF MISSISSAUGA

PLAN SHOWING ANALYZED SOURCES OF CONTINUOUS NOISE

FIGURE 5A



Existing Commercial to the southeast - Food Basics (Continuous Noise Sources)



Existing Commercial to the southeast - Food Basics (Impulsive Noise Sources)

JADE ACOUSTICS

Jade Acoustics Inc.
411 Confederation Parkway
Unit 19
Concord, Ontario L4K 0A8
Tel: 905-660-2444
Fax: 905-660-4110

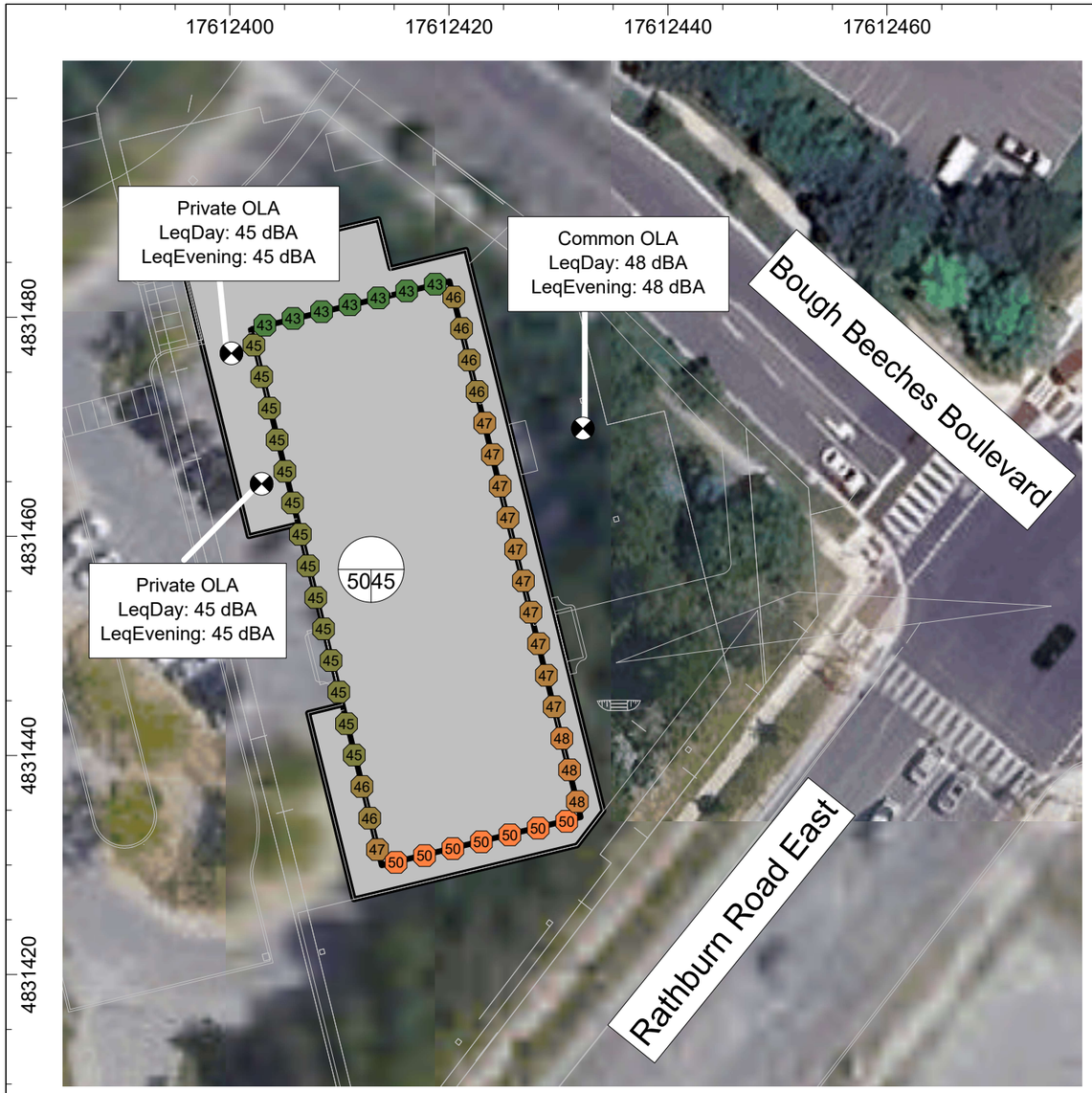
Date: June 2026

Jade File: 05-070

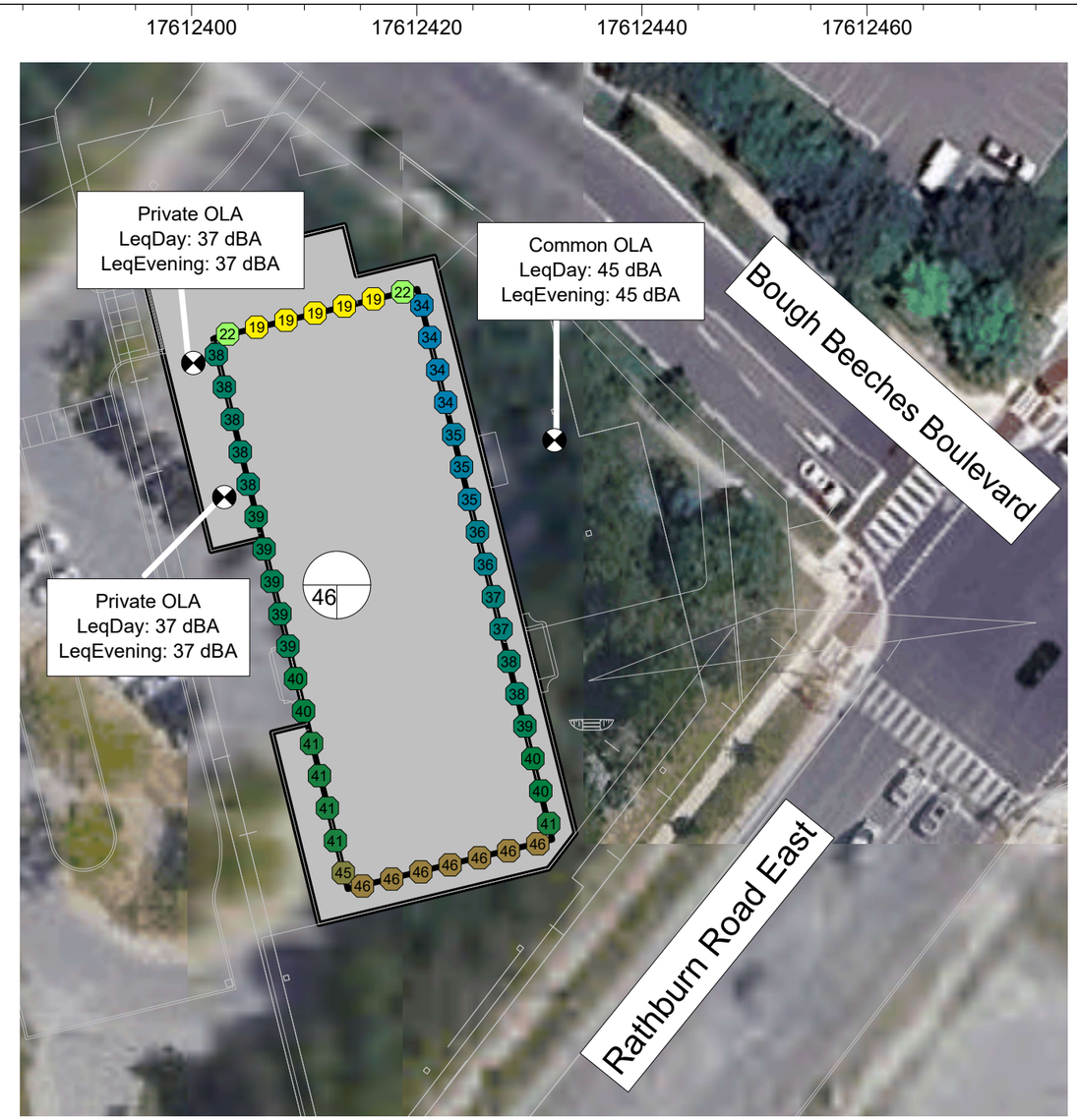
PROPOSED RESIDENTIAL DEVELOPMENT
DIXIE ROAD AND RATHBURN ROAD EAST
CITY OF MISSISSAUGA

PLAN SHOWING ANALYZED SOURCES OF CONTINUOUS NOISE
AND IMPULSIVE NOISE AT FOOD BASICS

FIGURE 5B



PREDICTED SOUND LEVELS DUE TO CONTINUOUS NOISE



PREDICTED SOUND LEVELS DUE TO IMPULSIVE NOISE

JADE ACOUSTICS

Jade Acoustics Inc.
411 Confederation Parkway
Unit 19
Concord, Ontario L4K 0A8
Tel: 905-660-2444
Fax: 905-660-4110

Date: June 2026

Jade File: 05-070

PROPOSED RESIDENTIAL DEVELOPMENT
DIXIE ROAD AND RATHBURN ROAD EAST
CITY OF MISSISSAUGA

PLAN SHOWING PREDICTED SOUND LEVELS
DUE TO CONTINUOUS NOISE AND IMPULSIVE NOISE
- WITHOUT MITIGATION MEASURES

FIGURE 6

APPENDIX A

CORRESPONDENCE REGARDING ROAD TRAFFIC DATA

Date: June 20, 2025
Requestor: Wai Lung (Jake) Chong, Jade Acoustics Inc.
Request Type: Noise Traffic Data Request
Location: Dixie Road - 500m North of Rathburn Road

Wai Lung (Jake) Chong,

As per your request, please see below traffic data from 2024:

	Existing	**Ultimate**
24 Hour Traffic Volume	35003	48600
# of Lanes	6	6
Day/Night Split	88/12	88/12
Day Trucks (% of Total Volume)	1.6% Medium 5.6% Heavy	1.6% Medium 5.6% Heavy
Night Trucks (% of Total Volume)	1.6% Medium 4.3% Heavy	1.6% Medium 4.3% Heavy
Right-of-Way Width	45 meters	
Posted Speed Limit	60 km/h	

Note:
1. The current volume is not the Annual Average Daily Traffic, but the averaged raw volumes over three data collection days. For Annual Average Traffic Volume, visit the Peel Open Data website below: http://opendata.peelregion.ca/data-categories/transportation/traffic-count-stations.aspx'2. The ultimate volume is the planned volume during a level of service 'D' where a 2 second vehicle headway and a volume to capacity ratio of 0.9 is assumed. Traffic signals and hourly variations in traffic are also incorporated into the ultimate volume.

If you require further assistance, please contact me at transportationplanningdata@peelregion.ca

Regards,

Shuvangkor Shusmoy Roy
Transportation Data & Modelling Advisor,
Transportation Policy & Modelling
Transportation Division | Public Works | Region of Peel
10 Peel Centre Drive, Suite B, 4th Floor

NOISE REPORT FOR PROPOSED DEVELOPMENT

Date: 17/Jun/25

REQUESTED BY:

Name: Wai Lung (Jake) Chong, P.Eng
Company: Jade Acoustics
Fax# 905-660-2444 Ext 233

PREPARED BY:

Name: Naveda Dukhan C.E.T
Tel#: 905-615-3200 EXT 8948

Location: Rathburn Rd E

ID# 650

ON SITE TRAFFIC DATA

Specific	*Street Names*				
	Rathburn Rd E (e. of Dixie)	Rathburn Rd E (w. of Dixie)			
AADT:	24300	25700			
# of Lanes:	4	4			
% Trucks:	3%	3%			
Medium/Heavy Truck Ratio:	55/45	55/45			
Day/Night Split:	90/10	90/10			
Posted Speed Limit:	50km/hr	50km/hr			
Gradient of Road:	2%	2%			
Ultimate R.O.W.:	30m	30m			

Comments: Ultimate Traffic Data Only (2041)

Jake Chong

From: Zara Georgis <ZGeorgis@lea.ca>
Sent: July 22, 2025 8:49 PM
To: Davor Sikic
Cc: Jake Chong; Dalila Giusti; Farrah Ward; Keanna Tacay-Clarke
Subject: RE: 1315 Bough Beeches - Traffic Data (Jade File: 05-070)
Attachments: 25251_Bough Beeches Blvd & Rathburn Rd_25369_2025_06_19.pdf

Hi Davor,

Please see below the existing traffic data for Bough Beeches Boulevard:

- **AADT:** 3,650
- **Heavy Truck Percentage:** 0.34%
- **Medium Truck Percentage:** 0.21%

Since Bough Beeches Boulevard is a local road, the City does not provide specific growth rates. You may apply your preferred growth assumptions to project the future AADT (e.g., for 2035) as part of your analysis. I've also attached the turning movement counts (TMCs) for your reference to make any additional assumptions.

The posted speed limit is 40 km/h.

Please let me know if you need anything else.

Thanks,

Zara Georgis, M.Eng., P.Eng.
Manager, Transportation Engineering (Western Canada)
LEA Consulting Ltd.
C: (403) 466-1729 **E:** ZGeorgis@lea.ca **W:** www.LEA.ca

From: Davor Sikic <davor@jadeacoustics.com>
Sent: July 17, 2025 9:47 AM
To: Zara Georgis <ZGeorgis@lea.ca>
Cc: Jake Chong <jake@jadeacoustics.com>; Dalila Giusti <dalila@jadeacoustics.com>; Farrah Ward <fward@stanfordhomes.ca>
Subject: RE: 1315 Bough Beeches - Traffic Data (Jade File: 05-070)

External Sender

Hi Zara,

An estimate of AADT for Bough Beeches Boulevard north of Rathburn Road East would be appreciated. We need an ultimate AADT or as a minimum a 10-year projection (2035).

Would a percentage of trucks with a medium/heavy split and a posted speed limit be available for this roadway?

Thank you.

Report-2.7		Location :	00406888NS	Dixie Road - 500m North of Rathburn Road										43.629194,-79.611725		
		Direction :	North + South	Road :												
		Dates :	2024-05-07													
		41	51	61	71	81	91	101	111	121	131	141	151		Pace	Number
Speeds,km/h ------->		41	51	61	71	81	91	101	111	121	131	141	151	160	Total	Speed	in Pace
OO:OO	0:15	7	6	43	57	24	3		1	1					142	55.3-75.3	110
0:15	0:30	3	3	24	28	14	1	1							74	52.7-72.7	56
0:30	0:45	4	3	23	39	7	3								79	50.5-70.5	62
0:45	1:00	4	4	26	21	9	1	1							66	51.3-71.3	48
OO:OO	1:00	18	16	116	145	54	8	2	1	1					361	55.3-75.3	110
1:00	1:15	7	1	18	33	9	4	1							73	56.4-76.4	56
1:15	1:30	4	4	9	31	12									60	55.9-75.9	47
1:30	1:45	8	1	11	23	11	1								55	57.5-77.5	40
1:45	2:00	2	1	9	21	6	1								40	58.7-78.7	36
1:00	2:00	21	7	47	108	38	6	1							228	56.4-76.4	56
2:00	2:15	1	2	11	15	6	2		1						38	52.7-72.7	27
2:15	2:30	1		11	16	9	1								38	52.6-72.6	30
2:30	2:45	2	2	4	14	4	1	1							28	57.3-77.3	21
2:45	3:00	5		7	13	12	3								40	57.7-77.7	27
2:00	3:00	9	4	33	58	31	7	1	1						144	52.6-72.6	30
3:00	3:15	1		7	10	4									22	50.1-70.1	17
3:15	3:30	1	1	1	12	11									26	59.8-79.8	23
3:30	3:45	1		8	15	6	2	1							33	52.3-72.3	25
3:45	4:00	2	1	5	13	9	2								32	58.2-78.2	22
3:00	4:00	5	2	21	50	30	4	1							113	52.3-72.3	25
4:00	4:15	3		6	18	14	2		1	1					45	59.0-79.0	35
4:15	4:30	4	3	15	19	11	3		1						56	52.0-72.0	37
4:30	4:45	8	1	13	32	12	4	2							72	58.0-78.0	49
4:45	5:00	5	3	16	29	20	4	1	1						79	56.3-76.3	61
4:00	5:00	20	7	50	98	57	13	3	3	1					252	56.3-76.3	61
5:00	5:15	11	1	18	48	30	2								110	56.0-76.0	86
5:15	5:30	9	2	27	47	30	8	3							126	56.4-76.4	86
5:30	5:45	21	3	22	90	46	14	1	2						199	56.6-76.6	144
5:45	6:00	19	6	42	94	46	4	2	1						214	56.3-76.3	152
5:00	6:00	60	12	109	279	152	28	6	3						649	56.3-76.3	152
6:00	6:15	17	9	25	108	61	17	2	1						240	58.0-78.0	174
6:15	6:30	35	28	71	126	62	12	1	2						337	53.5-73.5	213
6:30	6:45	76	39	109	157	85	14	2	1	1					484	54.4-74.4	283
6:45	7:00	78	53	109	134	102	27	3							506	56.3-76.3	268
6:00	7:00	206	129	314	525	310	70	8	4	1					1567	54.4-74.4	283
7:00	7:15	70	74	154	190	60	8	1							557	53.5-73.5	355
7:15	7:30	112	79	106	133	59	9								498	48.6-68.6	242
7:30	7:45	130	115	138	148	55	5	2							593	51.8-71.8	291
7:45	8:00	152	99	161	148	42	4	4							610	49.2-69.2	312
7:00	8:00	464	367	559	619	216	26	7							2258	53.5-73.5	355
8:00	8:15	160	87	173	150	43	7								620	49.9-69.9	335
8:15	8:30	116	98	172	134	49	14	1							584	47.1-67.1	321
8:30	8:45	160	129	159	119	58	5	4							634	43.5-63.5	302
8:45	9:00	162	116	134	113	41	5	3							574	47.3-67.3	278
8:00	9:00	598	430	638	516	191	31	8							2412	49.9-69.9	335
9:00	9:15	112	97	110	161	46	8	1							535	49.2-69.2	275
9:15	9:30	92	59	151	137	41	8								488	50.8-70.8	289
9:30	9:45	94	66	149	147	40	8	2							506	47.9-67.9	299
9:45	10:00	124	101	107	127	50	6	2							517	48.9-68.9	244
9:00	10:00	422	323	517	572	177	30	5							2046	47.9-67.9	299
10:00	10:15	85	64	116	125	53	5	3							451	50.8-70.8	242
10:15	10:30	56	52	141	134	38	7	1							429	52.2-72.2	280
10:30	10:45	75	81	127	112	43	7	1							446	49.1-69.1	254
10:45	11:00	34	38	116	130	54	6	1							379	51.7-71.7	251
10:00	11:00	250	235	500	501	188	25	6							1705	52.2-72.2	280
11:00	11:15	71	65	129	114	47	5								431	51.9-71.9	245
11:15	11:30	69	63	133	103	34	5								407	48.8-68.8	246
11:30	11:45	54	62	122	122	49	6	3							418	48.5-68.5	250
11:45	12:00	60	58	127	125	47	6	1	1						425	49.5-69.5	256
11:00	12:00	254	248	511	464	177	22	4	1						1681	49.5-69.5	256

12:00	**12:15**	55	63	117	134	47	9	2						**427**	53.0-73.0	259
12:15	**12:30**	70	69	158	129	55	4	2						**487**	48.9-68.9	289
12:30	**12:45**	67	57	120	139	50	6							**439**	53.7-73.7	266
12:45	**13:00**	115	49	155	123	34	5	1						**482**	51.3-71.3	279
12:00	**13:00**	307	238	550	525	186	24	5						**1835**	48.9-68.9	289
13:00	**13:15**	62	65	146	140	50	4							**467**	51.3-71.3	289
13:15	**13:30**	64	58	133	131	53	4	2						**445**	47.9-67.9	270
13:30	**13:45**	76	58	133	124	42	8							**441**	51.8-71.8	260
13:45	**14:00**	98	74	120	98	48	6	3	1					**448**	51.8-71.8	221
13:00	**14:00**	300	255	532	493	193	22	5	1					**1801**	51.3-71.3	289
14:00	**14:15**	39	53	147	161	35	10	2						**447**	50.6-70.6	308
14:15	**14:30**	18	59	182	177	53	13	2						**504**	51.3-71.3	361
14:30	**14:45**	97	74	136	149	41	11	2	1					**511**	49.4-69.4	289
14:45	**15:00**	50	49	145	173	54	6	2	2					**481**	54.1-74.1	323
14:00	**15:00**	204	235	610	660	183	40	8	3					**1943**	51.3-71.3	361
15:00	**15:15**	118	100	184	150	36	2	2						**592**	47.8-67.8	351
15:15	**15:30**	49	133	162	150	29	6	1	3				1	**534**	48.0-68.0	346
15:30	**15:45**	64	90	214	171	39	6	1	1			1		**587**	48.0-68.0	401
15:45	**16:00**	135	134	168	178	32	9							**656**	45.7-65.7	382
15:00	**16:00**	366	457	728	649	136	23	4	4			1	1	**2369**	48.0-68.0	401
16:00	**16:15**	138	131	179	172	25	5				1			**651**	46.7-66.7	404
16:15	**16:30**	188	135	186	150	18	3							**680**	45.1-65.1	385
16:30	**16:45**	46	146	233	219	27	3	1						**675**	49.0-69.0	461
16:45	**17:00**	153	106	175	149	42	5							**630**	46.2-66.2	340
16:00	**17:00**	525	518	773	690	112	16	1			1			**2636**	49.0-69.0	461
17:00	**17:15**	127	139	179	137	50	11	1		1				**645**	44.4-64.4	369
17:15	**17:30**	99	135	204	176	62	10		1			1		**688**	48.6-68.6	387
17:30	**17:45**	159	130	192	156	36	5	1						**679**	46.3-66.3	376
17:45	**18:00**	172	105	167	158	51	10	1						**664**	47.3-67.3	336
17:00	**18:00**	557	509	742	627	199	36	3	1	1		1		**2676**	48.6-68.6	387
18:00	**18:15**	168	136	156	98	24	5	2						**589**	43.7-63.7	309
18:15	**18:30**	128	98	173	121	41	5							**566**	48.9-68.9	315
18:30	**18:45**	48	65	197	157	48	3		1					**519**	50.2-70.2	356
18:45	**19:00**	51	90	162	132	46	8	3	2			1		**495**	46.6-66.6	307
18:00	**19:00**	395	389	688	508	159	21	5	3			1		**2169**	50.2-70.2	356
19:00	**19:15**	44	56	147	155	38	10	3	1					**454**	49.8-69.8	307
19:15	**19:30**	42	38	123	146	43	10	2						**404**	51.0-71.0	269
19:30	**19:45**	50	53	132	143	53	7							**438**	52.5-72.5	284
19:45	**20:00**	47	40	112	131	39		1						**370**	49.7-69.7	244
19:00	**20:00**	183	187	514	575	173	27	6	1					**1666**	49.8-69.8	307
20:00	**20:15**	62	56	120	129	39	5			1				**412**	49.5-69.5	254
20:15	**20:30**	51	58	103	113	29	5							**359**	47.9-67.9	223
20:30	**20:45**	45	56	118	95	31	4	1	1					**351**	47.6-67.6	216
20:45	**21:00**	28	49	88	116	39	8	3						**331**	51.2-71.2	207
20:00	**21:00**	186	219	429	453	138	22	4	1	1				**1453**	49.5-69.5	254
21:00	**21:15**	37	28	95	110	34	5	1				2	1	**313**	52.1-72.1	209
21:15	**21:30**	27	34	94	108	30	7							**300**	51.6-71.6	206
21:30	**21:45**	19	25	88	104	42	7	1	1					**287**	52.5-72.5	203
21:45	**22:00**	17	16	73	93	33	10							**242**	51.8-71.8	170
21:00	**22:00**	100	103	350	415	139	29	2	1			2	1	**1142**	52.1-72.1	209
22:00	**22:15**	4	8	71	96	40	8	2						**229**	53.6-73.6	176
22:15	**22:30**	7	8	58	82	38	4							**197**	56.7-76.7	148
22:30	**22:45**	7	14	79	74	20		1						**195**	51.0-71.0	153
22:45	**23:00**	3	21	56	57	25	6		2					**170**	54.1-74.1	121
22:00	**23:00**	21	51	264	309	123	18	3	2					**791**	53.6-73.6	176
23:00	**23:15**	6	20	44	57	14	4							**145**	49.5-69.5	104
23:15	**23:30**	10	16	60	68	11	2	1						**168**	48.3-68.3	137
23:30	**23:45**	6	9	57	35	12	2		1					**122**	51.1-71.1	93
23:45	**OO:OO**	5	10	49	35	24	2		1					**126**	53.7-73.7	92
23:00	**OO:OO**	27	55	210	195	61	10	1	2					**561**	48.3-68.3	137
Total		**5498**	**4996**	**9805**	**10034**	**3423**	**558**	**99**	**32**	**5**	**1**	**5**	**2**	**34458**		
		16.0%	14.5%	28.5%	29.1%	9.9%	1.6%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM PEAK		**162**	**129**	**173**	**190**	**102**	**27**	**4**	**2**	**1**				**634**		
period		8:45	8:30	8:00	7:00	6:45	6:45	7:45	5:30	OO:OO				8:30		
% of class		2.9%	2.6%	1.8%	1.9%	3.0%	4.8%	4.0%	6.3%	20.0%					1.8%	
PM PEAK		**188**	**146**	**233**	**219**	**62**	**13**	**3**	**3**	**1**	**1**	**2**	**1**	**688**		
period		16:15	16:30	16:30	16:30	17:15	14:15	13:45	15:15	17:00	16:00	21:00	15:15	17:15		
% of class		3.4%	2.9%	2.4%	2.2%	1.8%	2.3%	3.0%	9.4%	20.0%	100.0%	40.0%	50.0%		2.0%	

15% Percentile :	**39**	KPH
50% Percentile :	**58**	KPH
85% Percentile :	**70**	KPH
95% Percentile :	**78**	KPH

20 KPH Pace Speed:	**49.8-69.8**	KPH
Number in Pace:	**19900**	
Percent in Pace:	**57.8**	%
Number of Vehicles >60 KPH:	**15139**	
Percent of Vehicles >60 KPH:	**43.9**	%
Mean Speed(average):	**56**	KPH

Report-2.8		Location :	00406888NS	Dixie Road - 500m North of Rathburn Road										43.629194,-79.611725		
		Direction :	North + South	Road :												
		Dates :	2024-05-08													
		41	51	61	71	81	91	101	111	121	131	141	151		Pace	Number
Speeds,km/h ------->		41	51	61	71	81	91	101	111	121	131	141	151	160	Total	Speed	in Pace
OO:OO	0:15	9	3	22	45	26	3	1							109	52.0-72.0	75
0:15	0:30	6	4	36	39	14	4	1							104	54.1-74.1	83
0:30	0:45	5	2	24	27	9		1							68	51.8-71.8	52
0:45	1:00	7		23	39	12	2								83	53.4-73.4	64
OO:OO	1:00	27	9	105	150	61	9	3							364	54.1-74.1	83
1:00	1:15	2	3	18	24	9	3								59	51.0-71.0	42
1:15	1:30	3	2	16	17	13	2	1							54	57.9-77.9	43
1:30	1:45	1	4	14	14	13	4								50	54.2-74.2	33
1:45	2:00	7	1	12	22	8	1								51	54.9-74.9	39
1:00	2:00	13	10	60	77	43	10	1							214	57.9-77.9	43
2:00	2:15	3	1	9	18	5		1							37	53.0-73.0	28
2:15	2:30			13	18	12									43	54.0-74.0	40
2:30	2:45	1	1	7	9	7	2								27	57.0-77.0	21
2:45	3:00	4		9	8	3	1	1							26	52.7-72.7	18
2:00	3:00	8	2	38	53	27	3	2							133	54.0-74.0	40
3:00	3:15	1	2	8	12	3	2								28	52.7-72.7	21
3:15	3:30	1		9	13	4	2								29	52.5-72.5	23
3:30	3:45	1		6	16	6		2							31	52.1-72.1	26
3:45	4:00	1	1	11	15	5	3								36	53.4-73.4	28
3:00	4:00	4	3	34	56	18	7	2							124	53.4-73.4	28
4:00	4:15	5	1	11	12	5	1								35	51.7-71.7	24
4:15	4:30	5	4	12	16	11	2		1						51	49.9-69.9	28
4:30	4:45	4	2	17	32	15	4	2							76	57.0-77.0	53
4:45	5:00	7	1	24	40	10	1	1							84	52.6-72.6	65
4:00	5:00	21	8	64	100	41	8	3	1						246	52.6-72.6	65
5:00	5:15	9	3	16	44	20	2	2							96	60.3-80.3	67
5:15	5:30	16	4	36	60	37	10	6	1						170	54.7-74.7	114
5:30	5:45	15	8	44	74	36	15								192	54.8-74.8	136
5:45	6:00	19	4	39	93	57	13	4	2						231	57.3-77.3	173
5:00	6:00	59	19	135	271	150	40	12	3						689	57.3-77.3	173
6:00	6:15	22	20	63	96	51	9		1						262	53.6-73.6	175
6:15	6:30	42	26	97	134	70	10	3							382	55.0-75.0	249
6:30	6:45	47	49	109	149	81	18	2	1						456	54.9-74.9	273
6:45	7:00	53	40	123	132	83	26	5							462	54.3-74.3	274
6:00	7:00	164	135	392	511	285	63	10	2						1562	54.3-74.3	274
7:00	7:15	38	53	107	114	57	6	4							379	52.1-72.1	226
7:15	7:30	77	56	141	137	43	9	1							464	51.2-71.2	281
7:30	7:45	134	92	123	170	77	6	1	1						604	53.2-73.2	306
7:45	8:00	105	96	152	170	75	10	1	1						610	52.5-72.5	332
7:00	8:00	354	297	523	591	252	31	7	2						2057	52.5-72.5	332
8:00	8:15	122	103	153	162	54	9								603	48.5-68.5	330
8:15	8:30	119	105	138	174	67	13	1							617	49.8-69.8	319
8:30	8:45	125	99	144	167	49	6	1							591	49.8-69.8	313
8:45	9:00	126	83	162	144	44	8		1						568	48.6-68.6	313
8:00	9:00	492	390	597	647	214	36	2	1						2379	48.5-68.5	330
9:00	9:15	84	73	138	178	76	11								560	53.9-73.9	334
9:15	9:30	88	77	131	153	58	7	2							516	51.1-71.1	287
9:30	9:45	73	81	112	127	52	10	3							458	49.5-69.5	246
9:45	10:00	104	78	100	140	38	8								468	53.3-73.3	244
9:00	10:00	349	309	481	598	224	36	5							2002	53.9-73.9	334
10:00	10:15	69	54	110	141	41	7	1							423	53.2-73.2	258
10:15	10:30	70	73	125	123	46	9	5					1		452	50.4-70.4	250
10:30	10:45	60	45	132	114	34	7	9							401	49.9-69.9	247
10:45	11:00	29	46	140	122	57	3	4							401	50.4-70.4	262
10:00	11:00	228	218	507	500	178	26	19					1		1677	50.4-70.4	262
11:00	11:15	38	56	130	130	39	9	9							411	52.5-72.5	269
11:15	11:30	78	68	105	109	33	5	10							408	46.7-66.7	216
11:30	11:45	76	63	130	112	32	4	18							435	48.5-68.5	248
11:45	12:00	68	62	139	173	52	9	9							512	51.4-71.4	315
11:00	12:00	260	249	504	524	156	27	46							1766	51.4-71.4	315

12:00	**12:15**	47	59	123	144	44	1	9							**427**	52.9-72.9	275
12:15	**12:30**	69	74	138	157	53	3	16							**510**	49.9-69.9	297
12:30	**12:45**	88	52	123	154	51	9	9							**486**	51.0-71.0	277
12:45	**13:00**	38	59	144	170	53	14	2							**480**	51.9-71.9	320
12:00	**13:00**	242	244	528	625	201	27	36							**1903**	51.9-71.9	320
13:00	**13:15**	70	76	141	124	33	11	1							**456**	49.8-69.8	273
13:15	**13:30**	86	96	120	130	26	10		1						**469**	50.2-70.2	255
13:30	**13:45**	61	88	144	126	32	15		1						**467**	49.7-69.7	286
13:45	**14:00**	110	88	154	120	32	8	1							**513**	46.1-66.1	290
13:00	**14:00**	327	348	559	500	123	44	2	2						**1905**	46.1-66.1	290
14:00	**14:15**	72	58	148	145	44	12	1							**480**	51.0-71.0	293
14:15	**14:30**	66	91	188	159	36	5								**545**	47.0-67.0	353
14:30	**14:45**	123	117	160	109	36	2								**547**	48.6-68.6	291
14:45	**15:00**	89	89	154	154	48	8								**542**	48.5-68.5	315
14:00	**15:00**	350	355	650	567	164	27	1							**2114**	47.0-67.0	353
15:00	**15:15**	203	129	156	106	38	3								**635**	46.2-66.2	311
15:15	**15:30**	132	120	176	141	34	6		1						**610**	48.5-68.5	331
15:30	**15:45**	44	95	236	134	61	9		1						**580**	47.2-67.2	388
15:45	**16:00**	151	113	168	127	47	5								**611**	46.0-66.0	326
15:00	**16:00**	530	457	736	508	180	23		2						**2436**	47.2-67.2	388
16:00	**16:15**	150	114	220	151	46	5								**686**	48.2-68.2	399
16:15	**16:30**	91	98	200	211	69	8	1							**678**	49.4-69.4	417
16:30	**16:45**	96	130	194	167	47	7	2							**643**	48.2-68.2	378
16:45	**17:00**	161	93	197	162	51	7	1							**672**	48.3-68.3	369
16:00	**17:00**	498	435	811	691	213	27	4							**2679**	49.4-69.4	417
17:00	**17:15**	152	142	208	157	49	5								**713**	46.1-66.1	384
17:15	**17:30**	210	148	179	142	32	3	1							**715**	44.6-64.6	373
17:30	**17:45**	147	117	210	141	45	7	1	1	1	1				**671**	46.2-66.2	376
17:45	**18:00**	120	104	192	177	37	5								**635**	47.7-67.7	379
17:00	**18:00**	629	511	789	617	163	20	2	1	1	1				**2734**	46.1-66.1	384
18:00	**18:15**	54	71	218	166	48	6	1	1						**565**	49.0-69.0	389
18:15	**18:30**	50	92	193	153	54	4		1						**547**	48.1-68.1	350
18:30	**18:45**	62	75	189	132	52	8		1						**519**	50.4-70.4	327
18:45	**19:00**	64	47	169	161	48	9	1							**499**	52.6-72.6	332
18:00	**19:00**	230	285	769	612	202	27	2	3						**2130**	49.0-69.0	389
19:00	**19:15**	27	44	158	209	53	10	1							**502**	51.7-71.7	371
19:15	**19:30**	33	20	155	175	55	5	2				1			**446**	51.0-71.0	330
19:30	**19:45**	34	35	135	182	40	6	1							**434**	51.5-71.5	319
19:45	**20:00**	21	17	139	202	52	10								**441**	53.4-73.4	345
19:00	**20:00**	115	116	587	768	200	31	4				1			**1823**	51.7-71.7	371
20:00	**20:15**	45	36	108	137	32	7								**365**	50.3-70.3	249
20:15	**20:30**	12	24	87	142	50	10								**325**	52.5-72.5	242
20:30	**20:45**	17	14	98	172	49	7	3							**360**	54.5-74.5	280
20:45	**21:00**	14	12	87	166	58	6	1							**344**	56.4-76.4	281
20:00	**21:00**	88	86	380	617	189	30	4							**1394**	56.4-76.4	281
21:00	**21:15**	13	9	105	141	43	9	2							**322**	51.0-71.0	246
21:15	**21:30**	15	18	85	125	44	11								**298**	53.3-73.3	226
21:30	**21:45**	20	19	95	137	44	10		1						**326**	54.0-74.0	239
21:45	**22:00**	14	18	56	97	50	6	3		1					**245**	55.8-75.8	167
21:00	**22:00**	62	64	341	500	181	36	5	1	1					**1191**	51.0-71.0	246
22:00	**22:15**	11	8	63	110	35	8	2							**237**	55.6-75.6	178
22:15	**22:30**	11	7	87	78	44	4	1							**232**	53.3-73.3	169
22:30	**22:45**	12	4	34	85	57	8	4	1						**205**	59.0-79.0	150
22:45	**23:00**	13	1	46	95	33	6	1		1					**196**	53.9-73.9	151
22:00	**23:00**	47	20	230	368	169	26	8	1	1					**870**	55.6-75.6	178
23:00	**23:15**	8	9	43	101	32	11	1							**205**	53.4-73.4	153
23:15	**23:30**	7		40	94	40	7	2							**190**	59.4-79.4	144
23:30	**23:45**	8	5	30	62	39	5	1		2					**152**	56.8-76.8	111
23:45	**OO:OO**	6	8	42	48	26	7	1							**138**	51.9-71.9	98
23:00	**OO:OO**	29	22	155	305	137	30	5		2					**685**	53.4-73.4	153
Total		**5126**	**4592**	**9975**	**10756**	**3771**	**644**	**185**	**19**	**5**	**1**	**1**	**1**		**35077**		
		14.6%	13.1%	28.4%	30.7%	10.8%	1.8%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%				
AM PEAK		**134**	**105**	**162**	**178**	**83**	**26**	**18**	**2**				**1**		**617**		
period		7:30	8:15	8:45	9:00	6:45	6:45	11:30	5:45				10:15		8:15		
% of class		2.6%	2.3%	1.6%	1.7%	2.2%	4.0%	9.7%	10.5%				100.0%			1.8%	
PM PEAK		**210**	**148**	**236**	**211**	**69**	**15**	**16**	**1**	**2**	**1**	**1**			**715**		
period		17:15	17:15	15:30	16:15	16:15	13:30	12:15	13:15	23:30	17:30	19:15			17:15		
% of class		4.1%	3.2%	2.4%	2.0%	1.8%	2.3%	8.6%	5.3%	40.0%	100.0%	100.0%				2.0%	

15% Percentile :	**41**	KPH
50% Percentile :	**59**	KPH
85% Percentile :	**70**	KPH
95% Percentile :	**79**	KPH

20 KPH Pace Speed:	**51.1-71.1**	KPH
Number in Pace:	**20738**	
Percent in Pace:	**59.1**	%
Number of Vehicles >60 KPH:	**16381**	
Percent of Vehicles >60 KPH:	**46.7**	%
Mean Speed(average):	**57**	KPH

Report-2.9

Location : **00406888NS** **Dixie Road - 500m North of Rathburn Road** 43.629194,-79.611725

Direction : **North + South** Road :

Dates : **2024-05-09**

Speeds,km/h ------->		41	51	61	71	81	91	101	111	121	131	141	151	160	Total	Pace Speed	Number in Pace
OO:OO	**0:15**	8	2	18	62	31	9		1	1					**132**	57.5-77.5	100
0:15	**0:30**	7		17	46	26	9	1	1	1	1				**109**	58.0-78.0	81
0:30	**0:45**	5	2	16	33	21	6	1							**84**	55.7-75.7	61
0:45	**1:00**	8	4	14	41	13	3		1						**84**	53.3-73.3	62
OO:OO	**1:00**	28	8	65	182	91	27	2	3	2	1				**409**	57.5-77.5	100
1:00	**1:15**	3	1	23	30	11	2								**70**	54.3-74.3	56
1:15	**1:30**	5	1	11	27	18	2								**64**	57.1-77.1	49
1:30	**1:45**	1	1	13	19	7	3								**44**	55.0-75.0	36
1:45	**2:00**	6	1	18	22	12	5	2							**66**	53.6-73.6	46
1:00	**2:00**	15	4	65	98	48	12	2							**244**	54.3-74.3	56
2:00	**2:15**	4	1	13	30	10	3	1	1		1				**64**	56.7-76.7	48
2:15	**2:30**	6	2	9	18	8	3								**46**	53.1-73.1	30
2:30	**2:45**	4		6	15	8	3	2		1					**39**	60.1-80.1	24
2:45	**3:00**	3	1	1	13	13	1								**32**	61.3-81.3	27
2:00	**3:00**	17	4	29	76	39	10	3	1	1	1				**181**	56.7-76.7	48
3:00	**3:15**	1		6	10	9	2		1						**29**	60.2-80.2	21
3:15	**3:30**	1		11	12	6	2								**32**	51.1-71.1	24
3:30	**3:45**	3		8	10	9	8	1							**39**	56.2-76.2	25
3:45	**4:00**	1	1	3	15	12	4								**36**	59.6-79.6	27
3:00	**4:00**	6	1	28	47	36	16	1	1						**136**	59.6-79.6	27
4:00	**4:15**	3		6	12	13	3				1				**38**	57.2-77.2	28
4:15	**4:30**	5	2	7	19	15	3	1							**52**	54.5-74.5	35
4:30	**4:45**	6		5	32	21	6	1							**71**	61.1-81.1	54
4:45	**5:00**	11	1	18	44	13	6								**93**	57.0-77.0	66
4:00	**5:00**	25	3	36	107	62	18	2			1				**254**	57.0-77.0	66
5:00	**5:15**	15		32	44	22	6	1							**120**	54.4-74.4	84
5:15	**5:30**	15	6	27	53	51	9	4							**165**	58.4-78.4	107
5:30	**5:45**	16	4	36	59	48	11	2							**176**	56.9-76.9	126
5:45	**6:00**	20	7	34	89	63	16	1	1						**231**	61.4-81.4	153
5:00	**6:00**	66	17	129	245	184	42	8	1						**692**	61.4-81.4	153
6:00	**6:15**	25	9	45	90	79	19	7	1	1	1				**277**	59.7-79.7	180
6:15	**6:30**	44	20	89	127	70	13	2	1						**366**	55.6-75.6	228
6:30	**6:45**	83	42	107	163	60	9	1							**465**	54.3-74.3	289
6:45	**7:00**	54	30	112	163	80	19	1							**459**	57.1-77.1	295
6:00	**7:00**	206	101	353	543	289	60	11	2	1	1				**1567**	57.1-77.1	295
7:00	**7:15**	48	60	158	136	86	10	3							**501**	53.0-73.0	302
7:15	**7:30**	57	75	144	131	38	9	1							**455**	50.9-70.9	280
7:30	**7:45**	71	67	114	222	72	14								**560**	52.1-72.1	349
7:45	**8:00**	61	73	154	231	88	19	1	1						**628**	50.9-70.9	385
7:00	**8:00**	237	275	570	720	284	52	5	1						**2144**	50.9-70.9	385
8:00	**8:15**	123	106	187	192	57	15	2							**682**	49.9-69.9	385
8:15	**8:30**	126	122	147	148	61	6	1		1					**612**	47.8-67.8	304
8:30	**8:45**	142	69	153	159	63	15	2							**603**	50.9-70.9	314
8:45	**9:00**	106	75	140	145	55	7	1							**529**	50.0-70.0	292
8:00	**9:00**	497	372	627	644	236	43	6		1					**2426**	49.9-69.9	385
9:00	**9:15**	88	87	236	142	57	6	4							**620**	47.8-67.8	403
9:15	**9:30**	57	89	130	166	53	11	3	1						**510**	48.6-68.6	308
9:30	**9:45**	51	54	116	172	70	11	1							**475**	54.2-74.2	303
9:45	**10:00**	83	50	121	146	65	6								**471**	53.1-73.1	278
9:00	**10:00**	279	280	603	626	245	34	8	1						**2076**	47.8-67.8	403
10:00	**10:15**	54	53	145	135	51	8	2	1						**449**	50.0-70.0	291
10:15	**10:30**	55	60	142	137	57	5								**456**	53.3-73.3	293
10:30	**10:45**	47	47	101	142	43	3	1	1						**385**	53.6-73.6	247
10:45	**11:00**	31	28	137	164	50	6	1							**417**	50.0-70.0	302
10:00	**11:00**	187	188	525	578	201	22	4	2						**1707**	50.0-70.0	302
11:00	**11:15**	78	33	127	178	55	13	2							**486**	51.5-71.5	313
11:15	**11:30**	71	58	144	112	40	3	2							**430**	49.8-69.8	265
11:30	**11:45**	73	40	171	157	44	9	2							**496**	51.2-71.2	330
11:45	**12:00**	60	62	151	135	44	8	3							**463**	49.8-69.8	293
11:00	**12:00**	282	193	593	582	183	33	9							**1875**	51.2-71.2	330

12:00	**12:15**	131	60	150	123	41	6						**511**	50.4-70.4	280
12:15	**12:30**	145	71	119	121	37	3	1					**497**	47.4-67.4	253
12:30	**12:45**	85	76	114	149	58	10						**492**	50.6-70.6	264
12:45	**13:00**	23	70	136	173	57	12						**471**	49.3-69.3	318
12:00	**13:00**	384	277	519	566	193	31	1					**1971**	49.3-69.3	318
13:00	**13:15**	54	94	128	137	54	11	1					**479**	49.1-69.1	287
13:15	**13:30**	64	42	141	138	49	8	1					**443**	52.1-72.1	282
13:30	**13:45**	63	53	135	111	56	10	6	1				**435**	48.9-68.9	251
13:45	**14:00**	121	70	108	134	33	3						**469**	49.3-69.3	252
13:00	**14:00**	302	259	512	520	192	32	8	1				**1826**	49.1-69.1	287
14:00	**14:15**	89	59	137	125	42	3	1					**456**	50.0-70.0	270
14:15	**14:30**	42	60	168	172	35	8						**485**	51.3-71.3	344
14:30	**14:45**	112	90	161	115	22	1	23	1			2	**527**	49.1-69.1	289
14:45	**15:00**	61	82	156	156	58	4	32					**549**	50.9-70.9	313
14:00	**15:00**	304	291	622	568	157	16	56	1			2	**2017**	51.3-71.3	344
15:00	**15:15**	50	125	179	138	36	11	24					**563**	46.9-66.9	351
15:15	**15:30**	58	87	208	112	48	6	32					**551**	47.7-67.7	340
15:30	**15:45**	108	86	165	148	49	6	31					**593**	47.4-67.4	334
15:45	**16:00**	153	115	215	114	36	5	33					**671**	46.0-66.0	354
15:00	**16:00**	369	413	767	512	169	28	120					**2378**	46.0-66.0	354
16:00	**16:15**	92	112	218	171	44	8	23	1				**669**	48.4-68.4	414
16:15	**16:30**	235	138	177	119	44	9	25					**747**	46.4-66.4	334
16:30	**16:45**	115	105	186	126	47	7	31					**617**	46.1-66.1	344
16:45	**17:00**	162	117	164	129	25	6	30					**633**	46.1-66.1	312
16:00	**17:00**	604	472	745	545	160	30	109	1				**2666**	48.4-68.4	414
17:00	**17:15**	136	149	171	118	39	2	19		1			**635**	44.5-64.5	334
17:15	**17:30**	196	160	173	83	22	7	39					**680**	42.0-62.0	339
17:30	**17:45**	166	151	193	96	28	2	19					**655**	44.7-64.7	357
17:45	**18:00**	101	96	226	178	42	8						**651**	48.8-68.8	414
17:00	**18:00**	599	556	763	475	131	19	77		1			**2621**	48.8-68.8	414
18:00	**18:15**	90	129	195	163	55	7	2		1			**642**	46.8-66.8	377
18:15	**18:30**	63	139	192	164	43	8		2				**611**	49.0-69.0	374
18:30	**18:45**	40	85	169	164	57	12		1				**528**	52.0-72.0	340
18:45	**19:00**	10	82	142	194	67	11	5					**511**	52.6-72.6	341
18:00	**19:00**	203	435	698	685	222	38	7	3	1			**2292**	46.8-66.8	377
19:00	**19:15**	18	57	120	194	64	2	1	1				**457**	54.5-74.5	333
19:15	**19:30**	37	73	136	116	56	12						**430**	53.0-73.0	255
19:30	**19:45**	17	37	93	171	62	10	2					**392**	55.0-75.0	283
19:45	**20:00**	2	33	124	162	65	12	1					**399**	53.3-73.3	307
19:00	**20:00**	74	200	473	643	247	36	4	1				**1678**	54.5-74.5	333
20:00	**20:15**	30	37	106	172	46	9	1					**401**	54.2-74.2	289
20:15	**20:30**	31	19	96	153	50	8	2	1				**360**	53.2-73.2	255
20:30	**20:45**	18	24	105	133	50	2	1	1				**334**	49.9-69.9	243
20:45	**21:00**	17	20	77	139	66	14	1					**334**	55.5-75.5	233
20:00	**21:00**	96	100	384	597	212	33	5	2				**1429**	54.2-74.2	289
21:00	**21:15**	27	21	83	134	53	10	2	1				**331**	54.5-74.5	233
21:15	**21:30**	25	35	90	125	46	4						**325**	55.0-75.0	219
21:30	**21:45**	21	23	72	119	36	5	1	1				**278**	53.5-73.5	199
21:45	**22:00**	15	11	69	120	42	11	1					**269**	55.3-75.3	201
21:00	**22:00**	88	90	314	498	177	30	4	2				**1203**	54.5-74.5	233
22:00	**22:15**	10	9	50	116	55	5	4					**249**	56.0-76.0	184
22:15	**22:30**	7	4	47	115	35	4		1				**213**	54.5-74.5	170
22:30	**22:45**	10	9	54	119	45	3	1					**241**	55.6-75.6	197
22:45	**23:00**	14	5	48	113	43	8	1					**232**	54.9-74.9	181
22:00	**23:00**	41	27	199	463	178	20	6	1				**935**	55.6-75.6	197
23:00	**23:15**	6	5	40	79	41	7	2					**180**	55.7-75.7	136
23:15	**23:30**	12	15	61	107	33	4	2					**234**	52.7-72.7	173
23:30	**23:45**	10	4	26	79	35	11	3					**168**	57.9-77.9	122
23:45	**OO:OO**	10	4	34	73	34	10						**165**	54.8-74.8	121
23:00	**OO:OO**	38	28	161	338	143	32	7					**747**	52.7-72.7	173
Total		**4947**	**4594**	**9780**	**10858**	**4079**	**714**	**465**	**24**	**7**	**4**	**2**	**35474**		
		13.9%	13.0%	27.6%	30.6%	11.5%	2.0%	1.3%	0.1%	0.0%	0.0%	0.0%			
AM PEAK		**142**	**122**	**236**	**231**	**88**	**19**	**7**	**1**	**1**	**1**		**682**		
period		8:30	8:15	9:00	7:45	7:45	6:00	6:00	OO:OO	OO:OO	0:15		8:00		
% of class		2.9%	2.7%	2.4%	2.1%	2.2%	2.7%	1.5%	4.2%	14.3%	25.0%			1.9%	
PM PEAK		**235**	**160**	**226**	**194**	**67**	**14**	**39**	**2**	**1**		**2**	**747**		
period		16:15	17:15	17:45	18:45	18:45	20:45	17:15	18:15	17:00		14:30	16:15		
% of class		4.8%	3.5%	2.3%	1.8%	1.6%	2.0%	8.4%	8.3%	14.3%		100.0%		2.1%	

15%	Percentile :	**42** KPH
50%	Percentile :	**59** KPH
85%	Percentile :	**71** KPH
95%	Percentile :	**80** KPH

20 KPH Pace Speed:	**51.5-71.5**	KPH
Number in Pace:	**20698**	
Percent in Pace:	**58.3**	%
Number of Vehicles >60 KPH:	**17131**	
Percent of Vehicles >60 KPH:	**48.3**	%
Mean Speed(average):	**58**	KPH

APPENDIX B

ENVIRONMENTAL NOISE CRITERIA

ONTARIO MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MECP)

Reference: "Environmental Noise Guidelines Stationary and Transportation Sources – Approval and Planning", Publication NPC-300, August, 2013, released October 21, 2013 (updated final version # 22).

SOUND LEVEL CRITERIA FOR ROAD AND RAIL NOISE

TABLE C-1

Sound Level Limit for Outdoor Living Areas

Road and Rail

Time Period	Leq (16) (dBA)
16 hr., 07:00 - 23:00	55

TABLE C-2

Indoor Sound Level Limits
Road and Rail

Type of Space	Time Period	Leq (dBA)	
		Road	Rail
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40
	23:00 – 07:00	40	35

SOUND LEVEL CRITERIA FOR AIRCRAFT NOISE

TABLE C-3

Outdoor Aircraft Noise Limit

Time Period	NEF/NEP
24-hour	30

TABLE C-4

Indoor Aircraft Noise Limit
(Applicable over 24-hour period)

Type of Space	Indoor NEF/NEP*
Living/dining/den areas of residences, hospitals, nursing/retirement homes, schools, daycare centres, etc.	5
Sleeping Quarters	0

* The indoor NEF/NEP values in Table C-4 are used to determine acoustical insulation requirements based on the NEF/NEP contour maps.

SOUND LEVEL CRITERIA FOR STATIONARY SOURCES

TABLE C-5

Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA)
Outdoor Points of Reception

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	55
19:00 – 23:00	50	45	40	55

TABLE C-6

Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA)
Plane of Window of Noise Sensitive Spaces

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	60
19:00 – 23:00	50	50	40	60
23:00 – 07:00	45	45	40	55

TABLE C-7

Exclusion Limit Values for Impulsive Sound Level (LLM, dBAI)
Outdoor Points of Reception

Time of Day	Actual Number of Impulses in Period of One-Hour	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 23:00	9 or more	50	50	45	55
	7 to 8	55	55	50	60
	5 to 6	60	60	55	65
	4	65	65	60	70
	3	70	70	65	75
	2	75	75	70	80
	1	80	80	75	85

TABLE C-8

Exclusion Limit Values of Impulsive Sound Level (LLM, dBAI)
Plane of Window - Noise Sensitive Spaces (Day/Night)

Actual Number of Impulses in Period of One-Hour	Class 1 Area (07:00-23:00)/ (23:00-07:00)	Class 2 Area (07:00-23:00)/ (23:00-07:00)	Class 3 Area (07:00-19:00)/ (19:00-07:00)	Class 4 Area (07:00-23:00)/ (23:00-07:00)
9 or more	50/45	50/45	45/40	60/55
7 to 8	55/50	55/50	50/45	65/60
5 to 6	60/55	60/55	55/50	70/65
4	65/60	65/60	60/55	75/70
3	70/65	70/65	65/60	80/75
2	75/70	75/70	70/65	85/80
1	80/75	80/75	75/70	90/85

SUPPLEMENTARY SOUND LEVEL LIMITS

Indoor limits for transportation sources applicable to noise sensitive land uses are specified in Table C-2 and Table C-4. Table C-9 and Table C-10 are expanded versions of Table C-2 and Table C-4, and present guidelines for acceptable indoor sound levels that are extended to land uses and developments which are not normally considered noise sensitive. The specified values are maximum sound levels and apply to the indicated indoor spaces with the windows and doors closed. The sound level limits in Table C-9 and Table C-10 are presented as information for good-practice design objectives.

TABLE C-9

Supplementary Indoor Sound Level Limits
Road and Rail

Type of Space	Time Period	Leq (Time Period) (dBA)	
		Road	Rail
General offices, reception areas, retail stores, etc.	16 hours between 07:00 – 23:00	50	45
Living/dining areas of residences, hospitals, schools, nursing/retirement homes, daycare centres, theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	16 hours between 07:00 – 23:00	45	40
Sleeping quarters of hotels/motels	8 hours between 23:00 – 07:00	45	40
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	8 hours between 23:00 – 07:00	40	35

TABLE C-10

Supplementary Indoor Aircraft Noise Limit
(Applicable over 24-hour period)

Type of Space	Indoor NEF/NEP*
General offices, reception areas, retail stores, etc.	15
Individual or semi-private offices, conference rooms, etc.	10
Living/dining areas of residences, sleeping quarters of hotels/motels, theatres, libraries, schools, daycare centres, places of worship, etc.	5
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	0

* The indoor NEF/NEP values in Table C-10 are not obtained from NEF/NEP contour maps. The values are representative of the indoor sound levels and are used as assessment criteria for the evaluation of acoustical insulation requirements.

ENVIRONMENTAL NOISE CRITERIA

REGION OF PEEL

Reference: "General Guidelines for the Preparation of Acoustical Reports in the Region of Peel", November, 2012 (updated August 2020).

ROAD TRAFFIC NOISE

TYPE OF SPACE	TIME PERIOD	SOUND LEVEL LIMIT Leq*
Outdoor living area	7 am – 11 pm	Leq (16 hr.) = 55 dBA
Outside bedroom window	11 pm – 7 am	Leq (8 hr.) = 50 dBA
Indoor (bedrooms, hospitals)	11 pm – 7 am	Leq (8 hr.) = 40 dBA
Indoor (living rooms, hotels, private offices, reading rooms)	7 am – 11 pm	Leq (16 hr.) = 45 dBA
Indoor (general offices, shops)	7 am – 11 pm	Leq (16 hr.) = 50 dBA

* Leq, measured in A-weighted decibels (dBA), is the value of the constant sound level which would result in exposure to the same total sound level as would the specified time varying sound, if the constant sound level persisted over an equal time interval.

CITY OF MISSISSAUGA

Reference: City of Mississauga Official Plan – Chapter 6, "Value the Environment", City of Mississauga, April 8, 2021.

Outdoor and Indoor Sound Level Limits – Road and Rail			
Type of Space	**Time Period**	**Equivalent Sound Level** ***Leq**** (Time Period) (***dBA***)**	
		Road	**Rail**
Outdoor Living Areas (OLA)	07:00 – 23:00, 16 hours	55	55
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00, 16 hours	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycares)	23:00 – 7:00, 8 hours	45	40
Sleeping quarters	07:00 – 23:00, 16 hours	45	40
	23:00 – 7:00, 8 hours	40	35
Sleeping quarters of hotels/motels	23:00 – 7:00, 8 hours	45	40
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	23:00 – 7:00, 8 hours	40	35
General offices, reception areas, retail stores, etc.	07:00 – 23:00, 16 hours	50	45
Nursing/retirement homes, theatres, places of religious assembly, libraries	07:00 – 23:00, 16 hours	45	40
Individual or semi-private offices, conferences rooms, reading rooms, etc.	07:00 – 23:00, 16 hours	45	40
* Leq – The A-weighted sound level of a steady sound carrying the same total energy in the specified time period as the observed fluctuating sound. ***dBA*** –The A-weighted sound pressure level. Noise measured in decibels weighted to express loudness as perceived by human hearing.			

Note: Outdoor and Indoor Sound Level Limits – Road and Rail (adapted from Environmental Noise Guideline, Publication NPC-300)

APPENDIX C

SAMPLE CALCULATION OF PREDICTED UNMITIGATED SOUND LEVELS – TRANSPORTATION SOURCES

```
STAMSON 5.0        NORMAL REPORT        Date: 01-08-2025 10:07:31
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: day.te & night.te              Time Period: Day/Night 16/8 hours
Description: Roadways

Road data, segment # 1: Dixie (day/night)
----------------------------------------
Car traffic volume  : 39689/5488  veh/TimePeriod  *
Medium truck volume :   684/93    veh/TimePeriod  *
Heavy truck volume  :  2395/251   veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  48600
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume (nighttime truck%):1.60 (1.60)
    Heavy Truck  % of Total Volume (nighttime truck%):5.60 (4.30)
    Day (16 hrs) % of Total Volume     :  88.00

Data for Segment # 1: Dixie (day/night)
---------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :  15.00 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Rathburn (day/night)
--------------------------------------------
Car traffic volume  : 22436/2493  veh/TimePeriod  *
Medium truck volume :   382/42    veh/TimePeriod  *
Heavy truck volume  :   312/35    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  25700
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Rathburn (day/night)
------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :  15.00 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Bough Beeche (day/night)
------------------------------------------------
Car traffic volume  :  3982/442   veh/TimePeriod  *
Medium truck volume :    14/2     veh/TimePeriod  *
Heavy truck volume  :     8/1     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   4449
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   0.34
    Heavy Truck  % of Total Volume     :   0.21
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Bough Beeche (day/night)
------------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :   1.50 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: Dixie (day)
--------------------------------

Source height = 1.54 m

ROAD (0.00 + 70.05 + 0.00) = 70.05 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.25  74.49   0.00  -3.77  -0.66   0.00   0.00   0.00  70.05
-------------------------------------------------------------------------------

Segment Leq : 70.05 dBA

Results segment # 2: Rathburn (day)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 62.32 + 0.00) = 62.32 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.27  66.83   0.00  -3.82  -0.70   0.00   0.00   0.00  62.32
-------------------------------------------------------------------------------

Segment Leq : 62.32 dBA
```

Results segment # 3: Bough Beeche (day)

Source height = 0.67 m

ROAD (0.00 + 52.77 + 0.00) = 52.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	54.23	0.00	0.00	-1.46	0.00	0.00	0.00	52.77

Segment Leq : 52.77 dBA

Total Leq All Segments: 70.80 dBA

Results segment # 1: Dixie (night)

Source height = 1.44 m

ROAD (0.00 + 62.05 + 0.00) = 62.05 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.57	68.09	0.00	-4.73	-1.31	0.00	0.00	0.00	62.05

Segment Leq : 62.05 dBA

Results segment # 2: Rathburn (night)

Source height = 1.08 m

ROAD (0.00 + 54.22 + 0.00) = 54.22 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.58	60.31	0.00	-4.76	-1.32	0.00	0.00	0.00	54.22

Segment Leq : 54.22 dBA

Results segment # 3: Bough Beeche (night)

Source height = 0.69 m

ROAD (0.00 + 46.48 + 0.00) = 46.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.59	47.82	0.00	0.00	-1.34	0.00	0.00	0.00	46.48

Segment Leq : 46.48 dBA

Total Leq All Segments: 62.81 dBA

Note the above overall Leq values do not reflect predicted sound levels. The respective road reference sound levels (with necessary corrections) are applied in CadnaA to represent the sound power emissions associated with the analyzed roadways.

SAMPLE CALCULATION OF PREDICTED UNMITIGATED SOUND LEVELS – TRANSPORTATION SOURCES USING (ORNAMENT/STAMSON FOR COMPARISON PURPOSES)

```
STAMSON 5.0        NORMAL REPORT        Date: 05-03-2026 15:31:42
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: soutbr_d.te          Time Period: Day/Night 16/8 hours
Description: South facade

Road data, segment # 1: Dixie (day/night)
----------------------------------------
Car traffic volume  : 39689/5488  veh/TimePeriod  *
Medium truck volume :   684/93    veh/TimePeriod  *
Heavy truck volume  :  2395/251   veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  48600
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.60
    Heavy Truck  % of Total Volume     :   5.60 (nighttime = 4.3%)
    Day (16 hrs) % of Total Volume     :  88.00

Data for Segment # 1: Dixie (day/night)
---------------------------------------
Angle1   Angle2           : -48.00 deg   17.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 161.99 / 161.99 m
Receiver height           :  12.50 / 12.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Rathburn (day/night)
--------------------------------------------
Car traffic volume  : 22436/2493  veh/TimePeriod  *
Medium truck volume :   382/42    veh/TimePeriod  *
Heavy truck volume  :   312/35    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  25700
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Rathburn (day/night)
------------------------------------------
Angle1   Angle2           : -51.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  22.64 / 22.64  m
Receiver height           :  12.50 / 12.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Bough Beech (day/night)
-----------------------------------------------
Car traffic volume  :  4084/454   veh/TimePeriod  *
Medium truck volume :    14/2     veh/TimePeriod  *
Heavy truck volume  :     9/1     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   4563
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   0.34
    Heavy Truck  % of Total Volume     :   0.21
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Bough Beech (day/night)
-----------------------------------------------
Angle1   Angle2           :  33.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  46.94 / 46.94  m
Receiver height           :  12.50 / 12.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: Dixie (day)
--------------------------------

Source height = 1.54 m

ROAD (0.00 + 56.20 + 0.00) = 56.20 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -48     17   0.33  74.49   0.00 -13.73  -4.56   0.00   0.00   0.00  56.20
-------------------------------------------------------------------------------

Segment Leq : 56.20 dBA

Results segment # 2: Rathburn (day)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 62.76 + 0.00) = 62.76 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -51     90   0.34  66.83   0.00  -2.40  -1.68   0.00   0.00   0.00  62.76
-------------------------------------------------------------------------------

Segment Leq : 62.76 dBA
```

```
Results segment # 3: Bough Beech (day)
-------------------------------------

Source height = 0.68 m

ROAD (0.00 + 41.25 + 0.00) = 41.25 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    33     90   0.35  54.39   0.00  -6.71  -6.42   0.00   0.00   0.00  41.25
-------------------------------------------------------------------------------

Segment Leq : 41.25 dBA

Total Leq All Segments: 63.65 dBA

Results segment # 1: Dixie (night)
----------------------------------

Source height = 1.44 m

ROAD (0.00 + 49.77 + 0.00) = 49.77 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -48     17   0.33  68.09   0.00 -13.76  -4.56   0.00   0.00   0.00  49.77
-------------------------------------------------------------------------------

Segment Leq : 49.77 dBA

Results segment # 2: Rathburn (night)
-------------------------------------

Source height = 1.08 m

ROAD (0.00 + 56.24 + 0.00) = 56.24 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -51     90   0.34  60.31   0.00  -2.40  -1.68   0.00   0.00   0.00  56.24
-------------------------------------------------------------------------------

Segment Leq : 56.24 dBA

Results segment # 3: Bough Beech (night)
----------------------------------------

Source height = 0.68 m

ROAD (0.00 + 34.78 + 0.00) = 34.78 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    33     90   0.35  47.91   0.00  -6.71  -6.42   0.00   0.00   0.00  34.78
-------------------------------------------------------------------------------

Segment Leq : 34.78 dBA

Total Leq All Segments: 57.15 dBA


TOTAL Leq FROM ALL SOURCES (DAY): 63.65
                           (NIGHT): 57.15
```

APPENDIX D

SAMPLE CALCULATION OF SOUND LEVELS DUE TO STATIONARY SOURCES – CADNAA

Point Sources

Name	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuatio	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
		Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
		(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
FB - Condenser	!020000!	85	85	85	Lw	COND		0	0	0							0		(none)	1.68	g	17612487	4831262	156.31
FB - Condenser2	!020000!	85	85	85	Lw	cond		0	0	0							0		(none)	1.68	g	17612491	4831259	156.31
FB - AIH	!020000!	83.1	83.1	83.1	Lw	CompRmIn		0	0	0							0		(none)	1.47	g	17612495	4831256	156.1
FB - CMP	!020000!	90.1	90.1	90.1	Lw	CompRmEx1		0	0	0							0		(none)	1.47	g	17612479	4831267	156.1
FB - EF-1	!020000!	81.7	81.7	81.7	Lw	EF1		0	0	0				60	60	0	0		(none)	1.47	g	17612485	4831255	156.1
FB - EF-2	!020000!	74.4	74.4	74.4	Lw	EF2		0	0	0				60	60	0	0		(none)	1.22	g	17612458	4831270	155.85
FB - EF-3	!020000!	61.6	61.6	61.6	Lw	EF3_1		0	0	0				60	60	0	0		(none)	1.22	g	17612462	4831278	155.85
FB - EF-4	!020000!	61.6	61.6	61.6	Lw	EF3_1		0	0	0				60	60	0	0		(none)	1.22	g	17612465	4831265	155.85
FB - RTU1	!020000!	92.5	92.5	92.5	Lw	RTU1_2		0	0	0				60	60	30	0		(none)	1.86	g	17612516	4831307	156.49
FB - RTU2	!020000!	84	84	84	Lw	RTU2_2		0	0	0				60	60	30	0		(none)	1.84	g	17612504	4831330	156.47
FB - RTU3	!020000!	75.7	75.7	75.7	Lw	RTU3_2		0	0	0				60	60	30	0		(none)	1.65	g	17612510	4831324	156.28
FB - RTU4	!020000!	83.4	83.4	83.4	Lw	RTU5_2		0	0	0				60	60	30	0		(none)	1.65	g	17612496	4831320	156.28
FB - RTU5	!020000!	83.4	83.4	83.4	Lw	RTU5_2		0	0	0				60	60	30	0		(none)	1.65	g	17612526	4831302	156.28
FB - RTU6	!020000!	83.4	83.4	83.4	Lw	RTU5_2		0	0	0				60	60	30	0		(none)	1.65	g	17612533	4831297	156.28
FB - RTU7	!020000!	75.7	75.7	75.7	Lw	RTU3_2		0	0	0				60	60	30	0		(none)	1.65	g	17612515	4831287	156.28
FB - truck idling	!020000!	95	95	95	Lw	IDLE		0	0	0				3	3	0	0		(none)	3.5	r	17612431	4831290	150.32
FB - Refrigeration unit idling	!020000!	100.3	100.3	100.3	Lw	REEFER		0	0	0				30	30	0	0		(none)	3.5	r	17612433	4831289	150.33
Existing 20ST - RTU A	!020000!	74.3	74.3	74.3	Lw	RTU_B		0	0	0				60	42	24	0		(none)	0.65	g	17612355	4831468	206.65
Existing 20ST - CT	!020000!	84.4	84.4	84.4	Lw	CT		0	0	0							0		(none)	1.8	g	17612353	4831440	209.8
Existing 20ST - RTU B	!020000!	74.3	74.3	74.3	Lw	RTU_B		0	0	0				60	42	24	0		(none)	0.65	g	17612366	4831423	206.65
Existing 20ST - Air Con	!020000!	63	63	63	Lw	AIRCOND		0	0	0							0		(none)	0.65	g	17612363	4831443	206.65
Existing 11ST - MUA	!020000!	86.2	86.2	86.2	Lw	MUA		0	0	0							0		(none)	1.5	g	17612487	4831543	183.24
Existing 11ST - chiller	!02000000	84.6	84.6	84.6	Lw	chiller50		0	0	0							0		(none)	3.2	g	17612488	4831538	184.94
Existing 3 ST - CT	!02000000	84.6	84.6	84.6	Lw	chiller50		0	0	0							0		(none)	1.8	g	17612518	4831465	159.14
Existing 3 ST - MUA	!020000!	86.2	86.2	86.2	Lw	MUA		0	0	0							0		(none)	1.5	g	17612528	4831477	158.84
Existing 3 ST - MUA2	!020000!	86.2	86.2	86.2	Lw	MUA		0	0	0							0		(none)	1.5	g	17612535	4831487	158.84

Line Sources

Name	ID	Result. PWL			Result. PWL'			Lw / Li			Correction			Sound Reduction			Attenuatio	Operating Time			K0	Freq.	Direct.	Moving Pt. Src			
		Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area			Day	Special	Night				Number			Speed
		(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)			(min)	(min)	(min)	(dB)	(Hz)		Day	Evening	Night	(km/h)
FB - reefer truck routes	!020001!	90.6	90.6	0	65.7	65.7	0	PWL-Pt	RTP		0	0	0								0		(none)	2	2	0	10

Area Sources

Name	Sel.	M.	ID	Result. PWL			Result. PWL''			Lw / Li		norm.	Correction			Sound Reduction			Attenuatio	Operating Time			K0	Freq.	Direct.	Moving Pt. Src		
				Day	Evening	Night	Day	Evening	Night	Type	Value		Day	Evening	Night	R	Area			Day	Special	Night				Number		
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)			(min)	(min)	(min)	(dB)	(Hz)		Day	Evening	Night
Exhaust Shaft			!020002!	100.4	100.4	100.4	88.3	88.3	88.3	Lw	GEF++GEF		0	0	0								0		Opening (ÖAL28)			
Exhaust Shaft			!020002!	100.4	100.4	100.4	87.6	87.6	87.6	Lw	GEF++GEF		0	0	0								0		Opening (ÖAL28)			
existing 11ST - Exhaust Shaft		~	!020002!	74.5	74.5	74.5	71	71	71	Lw	GEF_SW		0	0	0					60	0	0	0		Opening (ÖAL28)			
existing 11ST - Exhaust Shaft			!020002!	77.7	77.7	77.7	74.2	74.2	74.2	Lw	GEF_SE		0	0	0					60	0	0	0		Opening (ÖAL28)			

Vertical Area Sources

Name	Sel.	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Correction			Sound Reduction			Attenuatio	Operating Time			K0	Freq.	Direct.	
				Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area			Day	Special	Night				
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)			(min)	(min)	(min)	(dB)	(Hz)		
FB - impulses - loading/unloading		~	!020103!	104	104	104	88	88	88	Lw	IMP104		0	0	0					60	60	0	0		Opening (ÖAL28)	
Existing 20ST - RTU D		~	!020004!	84.7	84.7	84.7	90.9	90.9	90.9	Lw	RTU_D		0	0	0					60	42	24	3		Opening (ÖAL28)	
Existing 20 ST - Chill louvre H		~	!020004!	67.5	67.5	67.5	78.5	78.5	78.5	Lw	RTU_H		0	0	0					60	42	24	3		Opening (ÖAL28)	
Existing 20 ST - Chill louvre I		~	!020004!	60.8	60.8	60.8	66.6	66.6	66.6	Lw	RTU_I		0	0	0					60	42	24	3		Opening (ÖAL28)	
FB - Refrigeration unit idling		~	!020004!	100.3	100.3	100.3	84.3	84.3	84.3	Lw	REEFER		0	0	0					60	60	0	0		Opening (ÖAL28)	
FB - truck idling		~	!020004!	95	95	95	79	79	79	Lw	IDLE		0	0	0					3	3	0	0		Opening (ÖAL28)	

Sound Power Levels Used for Noise Assessment

			31.5	63	125	250	500	1000	2000	4000	8000	A	Lin	
Refrigerated Truck Passby	RTP	Lw		107.5	106	104	99	95.5	95.5	91	84.5	102.7	111.4	JAI 03-089-15; 06-072-05
Loading Impulses - Food Store	IMP104	Lw		84.5	98.5	94.5	99.5	101.5	95.5	90.5	80.5	104	105.8	Jade File 14-004; 14-004-04
Truck Idle	IDLE	Lw		93.1	97.1	96.1	93.1	89.1	86.1	79.1	72.1	95	101.6	JAI/HGC - see memo
Reefer Unit Only	REEFER	Lw		107.1	104.3	101.8	94.7	91.9	94.1	90.3	83.8	100.3	110.1	SEE MEMO (from 21-067)
Keeprite KCL162 Condenser	COND	Lw		92.2	93.6	86.9	82.8	78.6	71.4	66.2	62.3	85	96.7	Manufacturer's data, JAI 04-016-03
CES-MPU-030	RTU1_2	Lw		101	96	92	91	86	83	80	79	92.5	103.1	Manufacturer's data, JAI 04-016-03
Lennox LGH180	RTU2_2	Lw		0	87	85	83	78	73	69	64	84	90.5	Manufacturer's data, JAI 04-016-03
Lennox LGH036-048	RTU3_2	Lw		0	79	75	73	71	67	61	54	75.7	81.8	Manufacturer's data, JAI 04-016-03
CES-SPU-005	RTU5_2	Lw		80	88	83	80	79	74	71	62	83.4	90.6	Manufacturer's data, JAI 04-016-03
Greenheck LBP-42-50	EF1	Lw		89	92	85	78	72	70	66	59	81.7	94.5	Manufacturer's data, JAI 04-016-03
Greenheck CUBE-121-4	EF2	Lw		76	77	81	68	63	64	56	47	74.4	83.6	Manufacturer's data, JAI 04-016-03
Greenheck CUBE-099-4	EF3_1	Lw		72	68	64	57	54	54	48	40	61.6	74.1	Manufacturer's data, JAI 04-016-03
Compressor Room Intake	CompRmIn	Lw (c)		93.5	89.1	86.9	77.6	73.5	71.4	74.6	70	83.1	95.8	Measured at a similar Food Basics, JAI 04-016-03
Compressor Room Exhaust (breakout noise)	CompRmEx1	Lw (c)		89.7	98.8	92.9	85.1	83.9	79.7	72.4	64.2	90.1	101.6	Measured at a similar Food Basics, JAI 04-016-03
Captiveaire A3-18T	RTU_B	Lw		84	81	65	68	66	68	66	65	74.3	87	Sound msrt on Jul 25-25
Nokia cooling fan louvre	RTU_D	Lw		60	63	69	82	81	76	74	68	84.7	85.6	Sound msrt on Jul 25-25
Chiller louvre H	RTU_H	Lw		52	51	59	57	62	63	59	43	67.5	68	Sound msrt on Jul 25-25
Chiller louvre I	RTU_I	Lw		56	59	48	46	54	58	48	38	60.8	65.1	Sound msrt on Jul 25-25
Cooling Tower	CT	Lw		101.6	101.6	96.6	94.6	85.6	87.6	85.6	77.6	96	106.4	MFG data
GEF	GEF	Lw (c)		79.8	88.2	89.5	92.3	91.5	87	81.3	70.9	97.3	109	Based on Mech drawings Sept 5-25 (05-070),JAI 23-147
Condenser Unit	AIRCOND	Lw	60.1	64.1	70.1	59.1	59.1	58.1	54.1	51.1	51.1	63	72.2	September 3, 2020 Measurements (JAI 14-100-02)
	MUA	Lw	73	76	78	70	81	78	83	73	64	86.2	87.4	Feb 26-26 Site measurement B002
	chiller50	Lw	39	58	66	74	78	78	77	76	76	84.6	90	provided by mech staff @ building
	GEF_SW	Lw	85	79	79	77	71	70	63	55	46	74.5	87.4	Feb 26-26 site measurement
	GEF_SE	Lw	83	82	79	76	75	75	65	57	50	77.7	87.4	Feb 26-26 site measurement

APPENDIX E

SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION

APPENDIX E-1
SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION*

FILE: 05-070
NAME: Dixie Road and Rathburn Road East
REFERENCE DRAWINGS: Site Plan and Architectural Drawings
LOCATION: proposed building, south façade, daytime

ROAD

Room: Bedroom

Exterior Wall area as a percentage of floor area:	South Face:	20%
	East Face:	20%
Window/Exterior Door area as a percentage of floor area:	South Face:	60%
	East Face:	60%

Number of components:	4	
Outdoor Leq:	South Face:	64 (+ 3 for reflections) = 67 dBA
	East Face:	62 (+ 3 for reflections) = 65 dBA
Indoor Leq:	45	
Angle Correction:	+2	
Noise Reduction (dBA):	24 (South Face)	
	22 (East Face)	
Noise Spectrum:	Road Traffic or Distant Aircraft	
Absorption:	Intermediate	

APPROPRIATE ELEMENTS

		STC Rating
Exterior Wall	South Face	STC 38
	East Face	STC 38
Window/Exterior Door	South Face	STC 28
	East Face	STC 26

* Based upon “Controlling Sound Transmission into Buildings”, Building Practice Note 56 by National Research Council of Canada, September, 1985.

APPENDIX F

QUESTIONNAIRE FROM FOOD BASICS

Jade Acoustics Inc. Consulting Engineers
411 Confederation Parkway
Unit 19
Concord, Ontario
L4K 0A8
Tel: (905) 660-2444
Fax: (905) 660-4110

July 23, 2025

Food Basics
4141 Dixie Road
Mississauga, Ontario
L4W 1V5

VIA E-MAIL/IN-PERSON

JADE ACOUSTICS

To Whom It May Concern:

Re: Information Request
Proposed Residential Development
Dixie Road and Rathburn Road East
City of Mississauga
Our File: 05-070

As requested by the owner of the property at 1315 Bough Beeches (east of Dixie Road and north of Rathburn Road East) and required by the City of Mississauga, we are conducting a noise study for the above-mentioned development, which is proposed for residential development. As part of the noise study, we are required by the Ministry of the Environment, Conservation and Parks to identify and quantify all potential noise sources. In order to do this adequately we have summarized the information we require regarding your operations. Please complete and return this form by fax or email. We will then contact you regarding a time and date to complete sound measurements (if required).

1. What is the primary function of your company? sell groceries

2. What are your hours of operation? 8 am - 9 pm
How many days per week? 7 days / week

3. Is your operation seasonal? If so, describe the operations associated with different seasons. no.

4. Are you currently operating at full capacity? If so, will you be operating at this level for the next several weeks? _____

5. If not, when do you anticipate being at full operating capacity? _____

JADE ACOUSTICS

6. What noise producing equipment do you have located: _____

(a) internally? _____

(b) internally but exhausting/intaking to the exterior? _____

(c) externally? _____

7. Does your company have any outside storage? If so, are there any activities such as forklifts or transport trucks which access the storage area? _____

8. How many trucks use the shipping/receiving areas during the day and at night? What are the typical truck delivery times? 10+ trucks a day. 7 am - 9 pm

9. What is the maximum number of trucks during any one-hour period, both during the day (7:00 a.m. to 7:00 p.m.) evening (7:00 p.m. to 11:00 p.m.) and at night (11:00 p.m. to 7:00 a.m.)? Where are they located? constantly receiving trucks in the receiving dock from 7 am - 8 pm.

10. Are shipping/receiving/other bay doors left open during the summer? Where are they located?

JADE ACOUSTICS

11. Are there any planned modifications/expansions to your facility? NO.

12. Does your company have a valid Certificate of Approval (C of A) or Environmental Compliance Approval (ECA) from the Ministry of the Environment, Conservation and Parks which includes a noise assessment and noise mitigation measures, if required? If yes, please provide us with a copy of the Approvals documentation and copy of the noise assessment report.

13. Could you please share a site plan showing the operation of your facility, including associated equipment? Additionally, if available, we would appreciate plans or a list detailing the mechanical equipment in CAD and/or PDF formats.

14. Other information

15. Contact Information

Name: _____

Position: _____

Telephone No.: _____

Fax No.: _____

E-mail: _____

If you have any questions, please contact the undersigned. Thank you in advance for your assistance.

Yours truly,

JADE ACOUSTICS INC.

Per: _____

Wai Lung (Jake) Chong, P.Eng.
jake@jadeacoustics.com

JC/jg
L:\Letters\2005\05-070 Jul 23-25 Dixie Road and Rathburn Road East - Food Basics (Information Request).docx

1) TRUCK DELIVERY: 7AM-6PM? yes

2) TRUCKS UNLOADING AT SAME TIME? 1 at a time

3) TRUCKS IDLING / REFRIGERATION UNITS AT NW LOADING & PARKING LOT? WHAT TIME? WHOLE NIGHT?

Yes if waiting.
During daytime.