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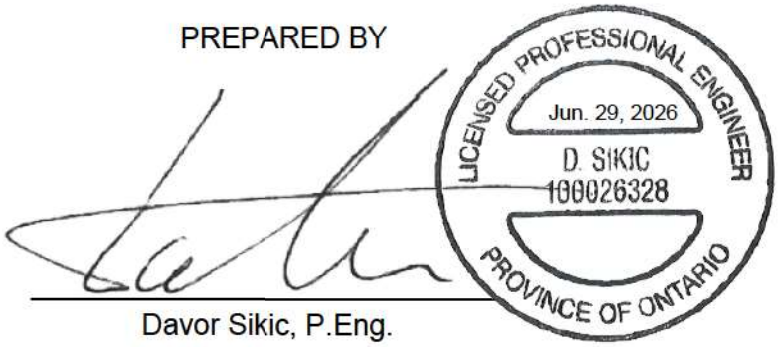
September 3, 2026

PRELIMINARY ENVIRONMENTAL NOISE REPORT

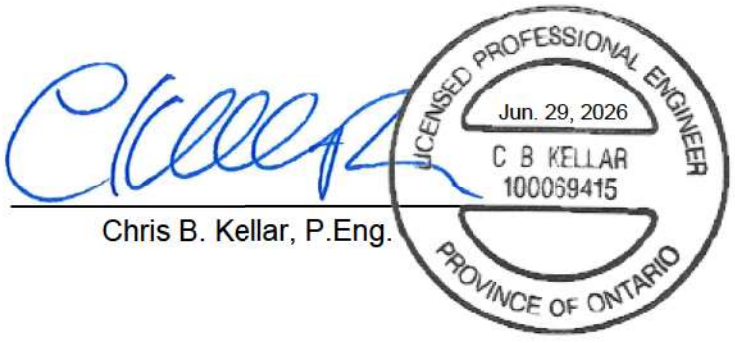
PROPOSED RESIDENTIAL DEVELOPMENT
12697 CREDITVIEW ROAD
TOWN OF CALEDON

PREPARED FOR
12697 CREDITVIEW DEVELOPMENTS LIMITED

PREPARED BY



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June 29, 2026
File: 24-024-01

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SUMMARY

The proposed residential development is located on the east side of Creditview Road, at the municipal address 12697 Creditview Road, in the Town of Caledon. It is subject to road traffic noise from Creditview Road, future Highway 413 which includes a transitway, and two proposed internal collector roadways, Street A and Street B.

The subject site is not affected by rail and/or aircraft traffic noise.

Existing and future institutional, commercial and/or industrial facilities/developments do not affect the proposed residential development as they are located at large separation distances.

The environmental noise guidelines for transportation and stationary noise sources of the Town of Caledon, 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 road traffic data obtained from the Town of Caledon, C.F. Crozier & Associates Inc. and The Highway 413 Project Team and found online, the sound levels were predicted for various locations in the proposed development. Sound levels due to the adjacent roads were determined using ORNAMENT, the noise prediction model of the MECP.

The results of the road traffic noise predictions were used to assess the required mitigation measures to address the transportation noise sources. With appropriate mitigative measures, all residential blocks (lots/units) in the development are predicted to meet the noise guidelines. Where minor excesses exist or mitigation is required, future occupants will be advised through the use of warning clauses.

All proposed blocks (lots/units) require central air conditioning and a warning clause to address the road traffic associated with Highway 413 expected to be constructed in the future.

Some residential blocks (lots/units) require a sound barrier and a warning clause. Table 3 and Figure 2 show the sound barrier requirements.

Based on the preliminary analysis, better than standard exterior window, exterior door and exterior wall construction is required for the blocks (lots/units) with exposure to Highway 413. Standard construction practices will be acoustically acceptable for all other proposed blocks (lots/units). Table 3 and Figure 2 show the façade acoustic requirements.

Once the final draft plan, architectural plans, and grading plans become available, a detailed environmental noise report should be prepared to ensure that the applicable noise guidelines can be achieved.

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 engineer to ensure the required mitigation measures have been incorporated.

1.0 INTRODUCTION

Jade Acoustics Inc. has been retained by the proponent to prepare a Preliminary Environmental Noise Report to investigate the potential noise impact of transportation and stationary sources on the proposed residential development to the satisfaction of the Town of Caledon.

The proposed site is identified as:

Draft Plan of Subdivision
Part of Lot 21, Concession 3,
West of Hurontario Street
Town of Caledon
Regional Municipality of Peel

Surrounding land uses are mainly existing and future residential.

The analysis was based on:

- Draft Plan of Subdivision prepared by Glen Schnarr & Associates Inc., dated February 23, 2026, received on April 7, 2026;
- Road traffic information provided by the Town of Caledon on April 16, 2026, C.F. Crozier & Associates Inc. on April 22, 2026 and The Highway 413 Project Team on May 11, 2026;
- Traffic Impact Study prepared by C.F. Crozier & Associates Inc. dated March 2026, received on April 22, 2026; and
- A site visit conducted by Jade Acoustics Inc. on March 30, 2026.

A Key Plan is attached as Figure 1.

Figure 2 shows the proposed residential development which includes single and rear lane detached dwellings, standard and rear lane townhouse dwellings, two residential reserve blocks, a neighbourhood park block, a natural heritage system block and internal roadways.

Single and rear lane detached dwellings with a maximum height of two (2) storeys, and standard and rear lane townhouse dwellings with a maximum height of three (3) storeys have been considered in this report.

The draft plan of subdivision does not include building footprint information at this time. It is expected that the details of building footprint will be provided at a future submission stage and the noise report will be updated accordingly.

2.0 NOISE SOURCES

2.1 Transportation Sources

The proposed development is subject to road traffic noise from Creditview Road, Highway 413 including its transitway and the proposed internal collector roads, Street A and Street B.

The Town of Caledon (Development Standards Manual, Version 5.0, 2019) requires that when assessing the road traffic noise impact on planned sensitive land uses, a forecast of twenty (20) years should be applied.

The Future Total 2041 AM and PM peak hour traffic volumes included in the information noted in Section 1.0, provided by C.F. Crozier & Associates Inc. for Creditview Road, Street A and Street B, were used to determine the 2051 annual average daily traffic (AADT) volumes using a yearly increase of 2% and accounting for the AM and PM peak hour volumes (whichever is higher) to represent 10% of the AADT. The medium and heavy truck percentages and day/night traffic split for Creditview Road were determined based in the traffic counts and other information provided by the Town of Caledon and C.F. Crozier & Associates Inc.

Additionally, the commercial vehicle percentages of 1% medium trucks and 1% heavy trucks and a day/night traffic split of 90%/10% have been assumed for Street A and Street B.

The 2051 AADT volume for Highway 413 was determined using the information provided by C.F. Crozier & Associates Inc. and found online. No specific road traffic data was available at this time from The Highway 413 Project Team. Percentages of medium and heavy trucks and a day/night traffic split typically used for freeways were accounted for in the noise calculations.

Based on information currently available, it seems that the Highway 413 transitway will most likely be a bus route rather than a light rail corridor. Therefore, bus traffic was accounted for in the noise analysis. The number of buses within a 24-hour time frame associated with the future Highway 413 transitway was assumed as no information is currently available.

The Town of Caledon (Development Standards Manual, Version 5.0, 2019) requires that when assessing the road traffic noise impact on planned sensitive land uses, a traffic speed of 10 km/h over the posted speed must be used. The posted speed limits, as noted in Table 1 of this report, were increased by 10 km/h and used in the calculations to satisfy the Town's requirements.

A speed limit of 110 km/h is expected for Highway 413. As this speed exceeds the maximum speed that can ben used in the MECP STAMSON computer program, the sound levels predicted using a speed of 100 km/h were adjusted. To address a speed of 120 km/h

(speed limit of 110 km/h + 10 km/h as required by the Town of Caledon), a correction factor of 1.7 dB, determined by comparing differences between the sound levels predicted at the speeds lower than 100 km/h, was added to the calculated sound levels due to Highway 413.

We note that Highway 413 is currently in the process of being designed. The Ontario Ministry of Transportation (MTO) will be contacted at the time of preparation of a detailed environmental noise report to confirm the speed that should be used for the noise calculations.

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

This site is not impacted by rail and/or aircraft traffic.

2.2 Stationary Sources

All existing institutional, commercial and industrial developments are located at separation distances of more than 1,000 m from the proposed residential development. Due to the large distances, they are acoustically insignificant and, as such, not considered further in the report.

There are no future institutional, commercial and/or industrial uses with potential to be acoustically significant at the proposed development. Therefore, a further investigation is not needed.

3.0 ENVIRONMENTAL NOISE CRITERIA

In addition to the Town of Caledon "Development Standards Manual (Version 5.0), dated 2019" and the "General Guidelines for the Preparation of Acoustical Reports in the Region of Peel" document dated November, 2012, updated August 2020, the environmental noise guidelines (NPC-300) of the Ontario Ministry of the Environment, Conservation and Parks (MECP) were used for this report.

A brief summary of the NPC-300 guidelines is given in Appendix B. The guidelines are also summarized below with consideration of the Region of Peel and Town of Caledon guidelines.

3.1 Road Traffic

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 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 is greater than 65 dBA, means must be provided so that windows 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 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, 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. A warning clause advising the occupant of the potential interference with some activities is also required.

In all cases, the air-cooled condenser units must not exceed an AHRI sound rating of 7.6 bels. The air-cooled condenser units must be sited in accordance with the zoning by-laws with respect to setbacks as well as location.

As required by the Town of Caledon, Region of Peel and MECP, 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.

3.1.2 Outdoors

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

Based on the "General Guidelines for the Preparation of Acoustic Reports in the Region of Peel", the sound level in outdoor living areas after applying attenuation measures should be the lowest aesthetically, technically and administratively practical level. The sound level objective is 55 dBA (LeqDay). If the sound level objective is exceeded, the report needs to provide a table of comparative sound barrier heights and show the height required to attenuate the noise to the MECP standards.

The Town of Caledon does not accept sound levels in outdoor living areas in excess of 55 dBA (LeqDay), unless design features exceed standard detail. In addition, the Town requires that, when assessing the road traffic impact on planned noise sensitive land uses, a road traffic speed of 10 km/h over the posted speed be used. Traffic volumes must be based on future traffic projections of a minimum of 20 years or the ultimate road traffic volumes (ultimate capacity) as determined by the road authority.

The Region of Peel generally requires that an acoustic fence does not exceed 2.0 m in height. The maximum acoustic fence height acceptable to the Region of Peel and the Town of Caledon is 2.4 m.

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 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 in the development agreement.

3.2 Stationary Sources

The guidelines of the MECP for stationary sources are to be used for the commercial/industrial/institutional facilities.

The MECP document NPC-300 titled "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning" has been used in this assessment.

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, provide the exclusion limit values of one-hour equivalent sound level (Leq, dBA) and impulsive sound level (L_{LM}, dBAI).

In addition, the MECP guidelines require that most industries have a valid Environmental Compliance Approval (ECA) or its precursor, a Certificate of Approval (C of A) to operate.

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 mitigation 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.

As noted in Section 2.2, there are no institutional, commercial and/or industrial uses affecting the proposed residential development. Therefore, the stationary source guidelines have not been used in this report.

4.0 NOISE IMPACT ASSESSMENT

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

4.1 Transportation Sources

For road traffic noise the sound level in terms of Leq, the energy equivalent continuous sound levels for both day (LeqDay, 16 hours) and night (LeqNight, 8 hours) were determined using ORNAMENT, the Traffic Noise Prediction Model of the MECP.

Table 2 provides a summary of predicted sound levels outdoor due to road traffic at specific locations without any mitigative measures. Appendix C includes sample calculations. The topography between the source and the receiver has been taken into account. The rear yard receiver was assumed to be 3 m from the middle of the rear wall of the house. The façade receiver location has been taken at 4.5 m above grade for two-storey dwellings and at 7.5 m above grade for three-storey dwellings. The analysis accounts for screening from the proposed dwellings themselves within the subject site. No screening by the future developments has been included in the noise calculations.

The outdoor living area for the proposed rear lane townhouse units was taken to be an elevated terrace above the garage with a depth of less than 4.0 m. Based on the MECP NPC-300 guidelines, less than 4.0 m deep elevated terraces are not considered to be outdoor receptors that require mitigation, therefore, they were not considered further in the report.

With the absence of building envelope information at this current stage, the analysis was based on the minimum setback information provided by Glen Schnarr & Associates Inc. summarized below:

- Rear yard setback of 6.0 m;
- Exterior side yard setback of 2.0 m; and
- Front yard setback of 2.5 m.

The Draft Plan of Subdivision referenced in Section 1.0, was used in the analysis.

For Block 12 (north lot) and Block 14 (north lot) with exposure to Highway 413, the unmitigated sound levels in the rear yards are predicted to be 62 dBA and 57 dBA respectively.

For Block 19 (all lots) to Block 21 (all lots) with exposure to Highway 413, the unmitigated sound levels at the front walls are predicted to be up to 65 dBA for daytime and nighttime hours. The unmitigated daytime sound levels in the rear yards of these blocks (lots) are predicted to be less than 55 dBA.

For Block 26 (west lot), the unmitigated daytime sound level in the rear yard is predicted to be between 55 dBA and 56 dBA.

For Block 30 (south unit) with exposure to Creditview Road and Highway 413, the unmitigated sound levels at the side wall are predicted to be 70 dBA (daytime) and 70 dBA (nighttime). The unmitigated sound level in the rear yard is predicted to be 61 dBA (daytime).

For Block 31 (north unit) with exposure to Highway 413, the unmitigated sound level at the front wall is predicted to be 70 dBA for daytime and nighttime hours. The unmitigated sound level in the rear yard is predicted to be 59 dBA.

For Block 34 (south unit) and Block 35 (north lot) flanking Street B, the unmitigated daytime and nighttime sound levels at the side walls are predicted to be 59 dBA and 51 dBA respectively. The unmitigated sound levels in the rear yards are predicted to be between 57 dBA and 58 dBA.

For Block 35 (south lot) with exposure to Creditview Road and Highway 413, the unmitigated daytime and nighttime sound levels at the side wall are predicted to be 64 dBA and 62 dBA respectively. The unmitigated sound level in the rear yard is predicted to be 62 dBA.

For Block 38 fronting onto Street A, the unmitigated front wall sound levels are predicted to be 63 dBA during the daytime hours and 57 dBA during the nighttime hours.

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

To note here and as mentioned throughout the report, it is expected that the confirmation of building footprint locations will be provided at a future submission stage and the noise report will be updated accordingly.

5.0 NOISE MITIGATION REQUIREMENTS

The required noise mitigation measures for the proposed residential development are provided below.

5.1 Road Traffic

5.1.1 Indoors

The indoor noise exposure criteria for road traffic can be achieved in all cases by using appropriate architectural elements for exterior wall, window and exterior door construction. The indoor criteria for road traffic noise are 40 dBA (Leq8hour) for the bedrooms during nighttime hours, 45 dBA (Leq8hour) for the living/dining rooms during nighttime hours and 45 (Leq16hour) for the living/dining rooms and bedrooms during daytime hours. The characteristic spectrum for the noise sources has been accounted for in the determination of the architectural components.

In determining the architectural requirements, for the blocks (lots/units) exposed to road traffic on Highway 413, it is assumed that a bedroom will be located on the upper floor of the dwelling and the worst case would involve a corner bedroom during nighttime hours because the day/night traffic split results in less than 5 dBA difference between the predicted daytime and nighttime sound levels. This noted difference is less than the difference between the MECP indoor criteria for road traffic for daytime and nighttime hours; therefore, a corner bedroom with calculated nighttime sound level was used for the assessment. The worst-case location would be the blocks fully exposed to Highway 413 positioned along the western limit of the proposed development. The exterior walls and windows were assumed to be 55% and 25%, respectively, of the associated floor area for both the façade perpendicular and the façade parallel to the roadway.

Sample architectural component selection calculations are shown in Appendix D.

For the worst-case location, exterior walls having an STC 45 rating and windows and exterior doors having an STC 36 rating would be needed. This includes Blocks 30 to 33 (all units). If brick or stone veneer with an STC 54 rating is used for the exterior wall construction, windows and exterior doors need to be STC 33. All the construction mentioned above is better that standard construction which complies with the minimum structural and safety requirements.

For the blocks with less exposure to Highway 413, exterior walls having an STC 40 rating and windows and exterior doors having an STC 31 would be needed which is better that standard construction. This includes Blocks 14, 16 and 19 to 21 (all lots), Blocks 27 to 29 (all units),

Block 35 (south lot) and Block 41. If brick or stone veneer is used, standard window and exterior wall construction would be acoustically acceptable.

Standard window, exterior door and exterior wall construction is expected to be acoustically acceptable for all proposed blocks (lots/units) not mentioned above.

The acoustical performance of a window and an exterior door as a whole depend on glass configuration/thickness, air space, material used for frames and construction alone expressed as a sound transmission class (STC) rating, generally available in the literature, does not address the STC rating of the whole window. Glass configuration with different frame materials and/or construction details often produces different STC ratings. Therefore, when better than standard construction is required, it is recommended that prior to installation, the window manufacturers provide proof (STC test results of window configuration from an accredited laboratory) that their windows and exterior doors meet the required STC ratings.

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

Where the sound level is equal to or greater than 60 dBA (LeqNight) or greater than 65 dBA (LeqDay) on the outside face of a bedroom or living/dining room window, the indoor noise criteria would not be met with open windows and/or exterior doors and provisions must be made to permit the windows/exterior doors to remain closed. In this case, the MECP guidelines require central air conditioning and a warning clause. Based on the predicted sound levels, all proposed residential blocks (lots/units) require central air conditioning to address the transportation noise sources

The outdoor air conditioning condensing units must meet the applicable sound limits and be sited in accordance with the Town's zoning by-laws.

Warning clauses will also be required to be placed in offers of purchase and sale or lease agreements and in the development agreement for all relevant residential blocks (lots/units) to make future occupants aware of the potential noise situation.

5.1.2 Outdoor Living Areas and Sound Barriers

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 Block 12 (north unit) and Block 30 (south unit), a 4.5 m high sound barrier and a 3.7 m high sound barrier respectively would be required to achieve a mitigated sound level of 55 dBA in the rear yards. As the maximum acoustic fence height acceptable to the Town of Caledon is 2.4 m, a berm would be needed to accommodate these sound barrier heights. As expected, due to the location of Blocks 12 and 30, no space for a berm is provided on the draft plan. Therefore, a 2.4 m high acoustic fence with no berm is recommended for Block 12 (north unit) and Block 30 (south unit), achieving mitigated sound levels between 57 dBA and 58 dBA.

For Block 33 (north unit), a 2.4 m high acoustic fence is expected to achieve 55 dBA in the rear yard.

The 2.4 m high acoustic fence should be installed along the side property line and returned to the side wall of the respective dwellings. The 2.4 m high acoustic fence should also be returned along the rear property line of Block 30 (west unit).

For the north lot in Blocks 1, 2 ,3 and 4, south lot in Blocks 17 and 18, north unit in Block 31, south unit in Block 32, south unit in Block 34 and north lot in Block 35, a 2.1 m high acoustic fence is predicted to achieve mitigated sound levels of less than 55 dBA in the rear yards. The 2.1 m high acoustic fence should be installed along the side property line and returned to the side wall of the respective dwellings. For Block 34 (south unit), the 2.1 m high acoustic fence should also be returned along the rear property line. For Block 35 (north lot), the 2.1 m high acoustic fence is to be returned to the side wall of the detached garage.

As indicated in Section 4.1, the unmitigated sound level in the rear yard of Block 26 (west unit) is predicted to be between 55 dBA and 56 dBA. As this is marginally above the design goal of 55 dBA, a sound barrier for Block 26 is not mandatory and, as such, not recommended. It should be noted that sound levels in the rear yards of Block 26 are expected to be 55 dBA or less, once a future residential development to the north is constructed.

The acoustical barrier requirements for the residential reserve Block 41 have not been calculated and the configuration of the dwelling is not known. This will be evaluated at the time of completion of the detailed environmental noise report.

Due to the anticipated exposures to Creditview Road and Highway 413 of the rear yards associated with Blocks 27, 28 and 29 included in the preliminary noise calculations, sound barriers are not required for the end townhouse units in these blocks. This is also applicable to the north unit of Block 30, south unit of Block 31, north unit of Block 32 and south unit of Block 33. The 2.1 m high acoustic fence for the north unit of Block 31 and south unit of Block 32 mentioned above is recommended due to the noise impact of Street B in addition to Highway 413.

Based on the preliminary noise calculations prepared for the rear yards of Blocks 19, 20 and 21, accounting for larger distances to Highway 413 northbound and southbound lanes relative Blocks 30 to 33 and anticipated exposures of the rear yards associated with Blocks 19, 20, and 21, sound barriers are not required for the end single detached dwellings of these blocks.

The location and height of the recommended acoustic fences are shown on Figure 2. Sample calculations of the sound barrier analysis are included as Appendix E.

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. This would involve extending the barrier to the front property line; returning to the side wall of the house or extending the sound barrier for a minimum of three times the distance between the side wall and the sound barrier, past the rear wall of the house. An acoustic gate of 20 kg/m^2 is very heavy. Therefore, if a gate is required, provided 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.

Gaps at the bottom of the acoustic fence are discouraged. If drainage gaps are necessary, special design techniques to create interrupted line of sight under the acoustic fence are required.

Where an excess will remain or where mitigation is required, a warning clause should be placed in offers of purchase and sale agreements and included in the development agreement.

6.0 RECOMMENDATIONS

1. The requirements as stipulated in Table 3 and shown on Figure 2 should be incorporated into the proposed residential development.

2. A detailed environmental noise report should be prepared once the final draft plan of subdivision, grading plans and architectural plans become available to ensure that the appropriate criteria are achieved.

3. Prior to the issuance of building permits, all building plans should be reviewed by an acoustical engineer to ensure compliance with the applicable guidelines.

4. Prior to final occupancy, all residential dwellings should be inspected by an acoustical engineer to ensure the required noise mitigation measures have been incorporated.

7.0 CONCLUSIONS

Based on the preliminary analysis, with the incorporation of the recommended noise mitigation measures, the sound levels are predicted to be within the appropriate environmental noise criteria. In accordance with the Town's, Region's and MECP's implementation guidelines, where mitigation is required, future occupants will be advised through the use of warning clauses.

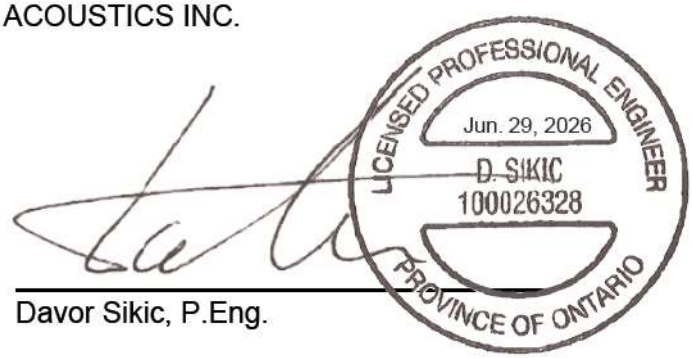
Once the final draft plan, architectural plans, and grading plans become available, a detailed environmental noise report should be prepared to ensure that the applicable noise guidelines can be achieved.

Prior to the issuance of building permits, the architectural plans should be reviewed by an acoustical engineer to ensure compliance with the applicable guidelines.

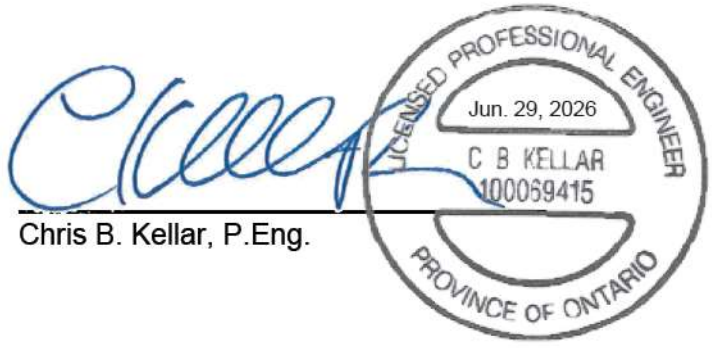
Prior to final occupancy, the blocks (lots/units) should be inspected by an acoustical engineer to ensure the required mitigative measures have been incorporated.

Respectfully submitted,

JADE ACOUSTICS INC.



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Per: _____
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DS/CK/jg
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8.0 STATEMENT OF LIMITATIONS

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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.

9.0 REFERENCES

1. "Model Municipal Noise Control By-Law", Final Report, 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'", J.D. Quirt, Division of Building Research, National Research Council of Canada, September, 1985.

4. "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).

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

6. "Development Standards Manual", Town of Caledon, Version 5.0, 2019.

7. "Impulse Vibration in Residential Buildings", Ontario Ministry of Environment, Publication NPC-207 (Draft), November, 1983.

TABLE 1

PROPOSED RESIDENTIAL DEVELOPMENT

12697 CREDITVIEW ROAD

TOWN OF CALEDON

SUMMARY OF ROAD TRAFFIC INFORMATION

A. ROAD TRAFFIC

ROAD	HIGHWAY 413	HIGHWAY 413 TRANSITWAY	CREDITVIEW ROAD	STREET A	STREET B
AADT (Annual Average Daily Traffic)	87,000 (2051)	400 (2051)	7,150 (2051)	8,450 (2051)	2,900 (2051)
No. of Lanes	6	2	2	2	2
Speed (km/h)	120*	120*	70*	60*	60*
Medium Trucks (%)	5**	100 (buses)	1.4	1***	1***
Heavy Trucks (%)	15**	0	2.2	1***	1***
Gradient (%)	2#	2#	2# (5##)	2#	2#
Day/Night Split (%)	67/33**	80/20	92/8	90/10#	90/10#

* As requested by the Town of Caledon, posted speed + 10 km/h was used in noise calculations.

** Typically used for freeways.

*** A medium truck/heavy truck ratio of 50%/50% was assumed.

Assumed.

Assumed for overpass.

TABLE 2

PROPOSED RESIDENTIAL DEVELOPMENT

12697 CREDITVIEW ROAD

TOWN OF CALEDON

PREDICTED UNMITIGATED SOUND LEVELS OUTDOORS DUE TO ROAD TRAFFIC*

Blocks (lots/units)*	Location**	Source	Distance (m)	Leq (dBA)*			
				Day Separate	Day Combined	Night Separate	Night Combined
Block 12 (north lot)	Rear Yard	Hwy. 413 Transitway	90.5	49	62	--	--
		Highway 413 NB	154.5	59		--	
		Highway 413 SB	194.5	57		--	
Block 14 (north lot)	Rear Yard	Hwy. 413 Transitway	157.5	44	57	--	--
		Highway 413 NB	221.5	54		--	
		Highway 413 SB	261.5	53		--	
Block 19 (north lot)	Rear Yard	Hwy. 413 Transitway	201.5	37	49	--	--
		Highway 413 NB	266.5	47		--	
		Highway 413 SB	306.5	46		--	
	Front Wall	Hwy. 413 Transitway	179.5	49	65	46	65
		Highway 413 NB	245.5	62		62	
		Highway 413 SB	285.5	61		61	
Block 21 (north lot)	Rear Yard	Hwy. 413 Transitway	195.0	39	54	--	--
		Highway 413 NB	289.5	51		--	
		Highway 413 SB	329.5	50		--	
	Front Wall	Hwy. 413 Transitway	172.5	50	65	47	65
		Highway 413 NB	268.5	63		63	
		Highway 413 SB	308.5	62		62	

* See Figure 2.

** Rear yard location taken 3 m from rear wall and 1.5 m above grade. Wall location taken 4.5 m above grade for second floor (lots), or 7.5 m above grade for third floor (units).

TABLE 2 - CONTINUED

PROPOSED RESIDENTIAL DEVELOPMENT

12697 CREDITVIEW ROAD

TOWN OF CALEDON

PREDICTED UNMITIGATED SOUND LEVELS OUTDOORS DUE TO ROAD TRAFFIC*

Blocks (lots/units)*	Location**	Source	Distance (m)	Leq (dBA)*			
				Day Separate	Day Combined	Night Separate	Night Combined
Block 26 (west lot)	Rear Yard	Hwy. 413 Transitway	209.0	40	56	--	--
		Highway 413 NB	301.5	53		--	
		Highway 413 SB	341.5	52		--	
Block 30 (south unit)	Rear Yard	Creditview Road	85.5	54	61	--	--
		Hwy. 413 Transitway	84.0	48		--	
		Highway 413 NB	148.5	57		--	
		Highway 413 SB	188.5	56		--	
	Front Wall	Creditview Road	82.5	54	70	46	70
		Hwy. 413 Transitway	62.5	57		54	
		Highway 413 NB	126.5	68		68	
		Highway 413 SB	166.5	66		66	
Block 31 (north unit)	Rear Yard	Hwy. 413 Transitway	84.5	42	59	--	--
		Highway 413 NB	148.5	52		--	
		Highway 413 SB	188.5	50		--	
		Street B	15.0	57		--	
	Front Wall	Hwy. 413 Transitway	62.5	57	70	54	70
		Highway 413 NB	126.5	68		68	
		Highway 413 SB	166.5	66		66	

* See Figure 2.

** Rear yard location taken 3 m from rear wall and 1.5 m above grade. Wall location taken 4.5 m above grade for second floor (lots), or 7.5 m above grade for third floor (units).

TABLE 2 - CONTINUED

PROPOSED RESIDENTIAL DEVELOPMENT

12697 CREDITVIEW ROAD

TOWN OF CALEDON

PREDICTED UNMITIGATED SOUND LEVELS OUTDOORS DUE TO ROAD TRAFFIC*

Blocks (lots/units)*	Location**	Source	Distance (m)	Leq (dBA)*			
				Day Separate	Day Combined	Night Separate	Night Combined
Block 34 (south unit)	Rear Yard	Street A	120.5	44	57	--	--
		Street B	15.0	57		--	
	Side Wall	Street A	11.5	59	--	51	--
Block 35 (north lot)	Rear Yard	Street A	47.0	51	58	--	--
		Street B	15.0	57		--	
Block 35 (south lot)	Rear Yard	Creditview Road	30.5	60	62	--	--
		Hwy. 413 Transitway	308.5	39		--	
		Highway 413 NB	389.0	54		--	
		Highway 413 SB	429.0	53		--	
	Side Wall	Creditview Road	28.5	61	64	54	62
		Hwy. 413 Transitway	289.5	43		40	
		Highway 413 NB	368.5	58		58	
		Highway 413 SB	408.5	57		57	
Block 38 (north unit)	Front Wall	Street A	15.5	62	63	55	57
		Street B	11.5	56		50	

* See Figure 2.

** Rear yard location taken 3 m from rear wall and 1.5 m above grade. Wall location taken 4.5 m above grade for second floor (lots), or 7.5 m above grade for third floor (units).

TABLE 3

PROPOSED RESIDENTIAL DEVELOPMENT

12697 CREDITVIEW ROAD

TOWN OF CALEDON

SUMMARY OF MINIMUM NOISE MITIGATION REQUIREMENTS*

Blocks (lots/units)	Air Conditioning[1]	Exterior Wall[2]*	Window[2]*	Sound Barrier[3]	Warning Clause[4]
Block 30 (south unit) and Block 33 (north unit)	Mandatory	Up to STC 45	Up to STC 36	2.4 m	A, B, C
Block 12 (north lot), Block 14 (north lot) and Block 35 (south lot)	Mandatory	Up to STC 40	Up to STC 31	2.4 m	A, B, C
Block 31 (north unit) and Block 32 (south unit)	Mandatory	Up to STC 45	Up to STC 36	2.1 m	A, B, C
Block 1 (north lot), Block 2 (north lot), Block 3 (north lot), Block 4 (north lot), Block 17 (south lot), Block 18 (south lot), Block 34 (south unit) and Block 35 (north lot)	Mandatory	Standard	Standard	2.1 m	A, B, C
Block 30 (all units except south unit), Block 31 (all units except north unit), Block 32 (all units except south unit) and Block 33 (all units except north unit)	Mandatory	Up to STC 45	Up to STC 36	No	A, B
Block 14 (all lots except north lot), Block 16 (all lots), Block 19 (all lots), Block 20 (all lots), Block 21 (all lots), Block 26 (all lots), Block 27 (all units), Block 28 (all units), Block 29 (all units) and Block 41**	Mandatory	Up to STC 40	Up to STC 31	No	A, B
All other blocks (lots/units)	Mandatory	Standard	Standard	No	A, B

* Based on preliminary calculations. See Section 5.1.1 for details.

** The evaluation of the any acoustical barrier requirements for Block 41 has not been completed at the time of this report as the dwelling configurations are not known.

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. Installation of central air conditioning is required. The air-cooled condenser unit should be placed in a noise insensitive location which complies with municipal by-laws. For condensing units, the AHRI sound rating must not exceed 7.6 bels.

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

3. Sound barriers must be of a solid construction with no gaps and have a minimum surface density of 20 kg/m^2. Earthen berms, solid walls/fences of adequate density or combinations of berms and walls/fences may be used.

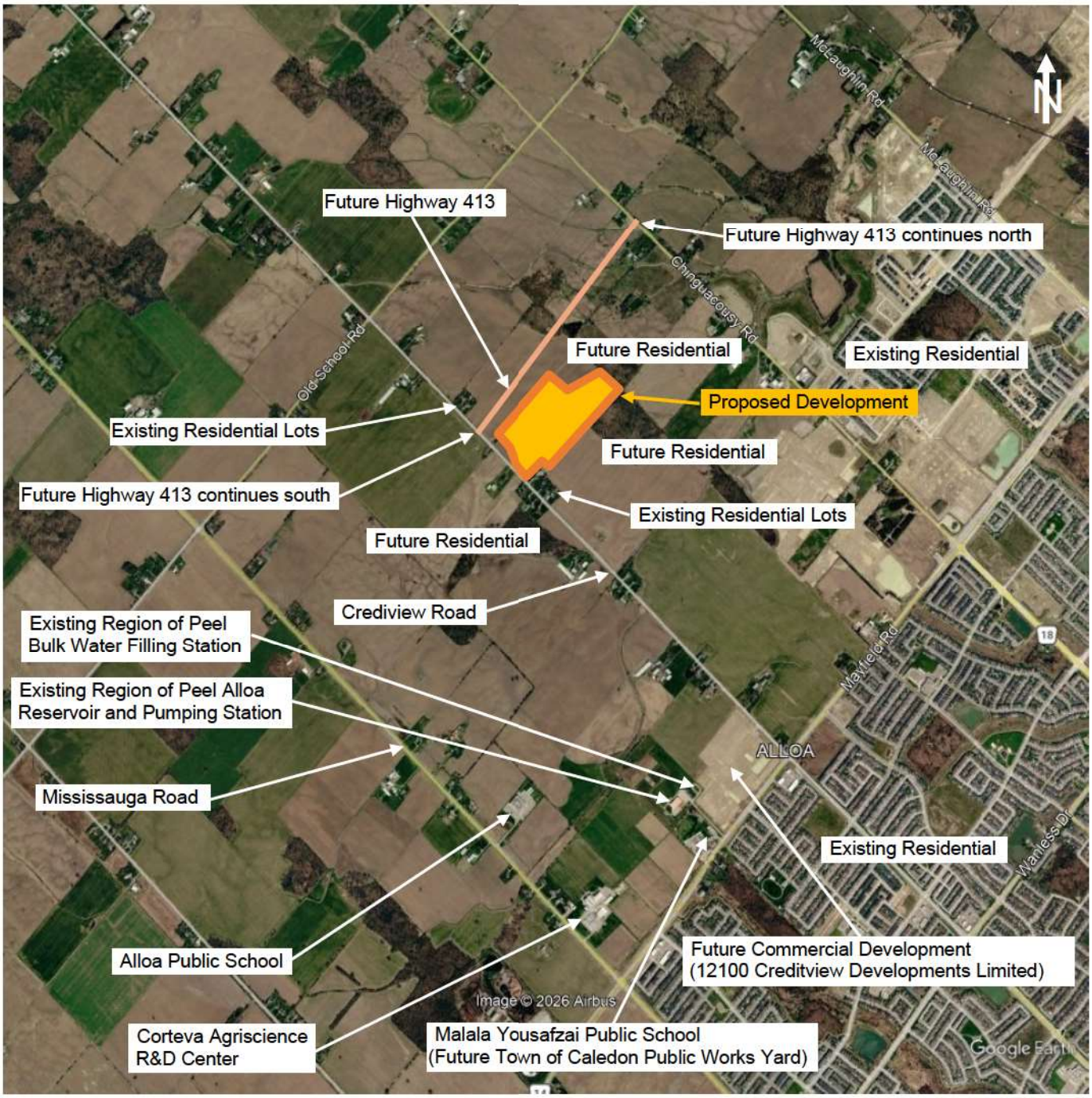
4. Suggested warning clauses to be included in the subdivision and/or condominium agreement and to be included in offers of purchase and sale or lease agreements for the dwelling unit in the designated blocks (lots/units):

   A. "Purchasers 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 levels 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."

   B. "Purchasers and/or tenants are advised that the dwelling unit has been or will be fitted with a central air conditioning system which will enable occupants to keep windows and exterior doors closed if road traffic noise interferes with their indoor activities (Note: locate air cooled condenser unit in a noise insensitive area and as required by municipal by-laws, and ensure that the unit has an AHRI sound rating not exceeding 7.6 bels)."

C. "Purchasers are advised that the acoustical berm and/or barrier as installed shall be maintained, repaired or replaced by the owner. Any maintenance repair or replacement shall be with the same material, to the same standards, and having the same colour and appearance of the original."

5. Conventional ventilated attic roof construction meeting typical construction practices is satisfactory in all cases.



N.T.S.

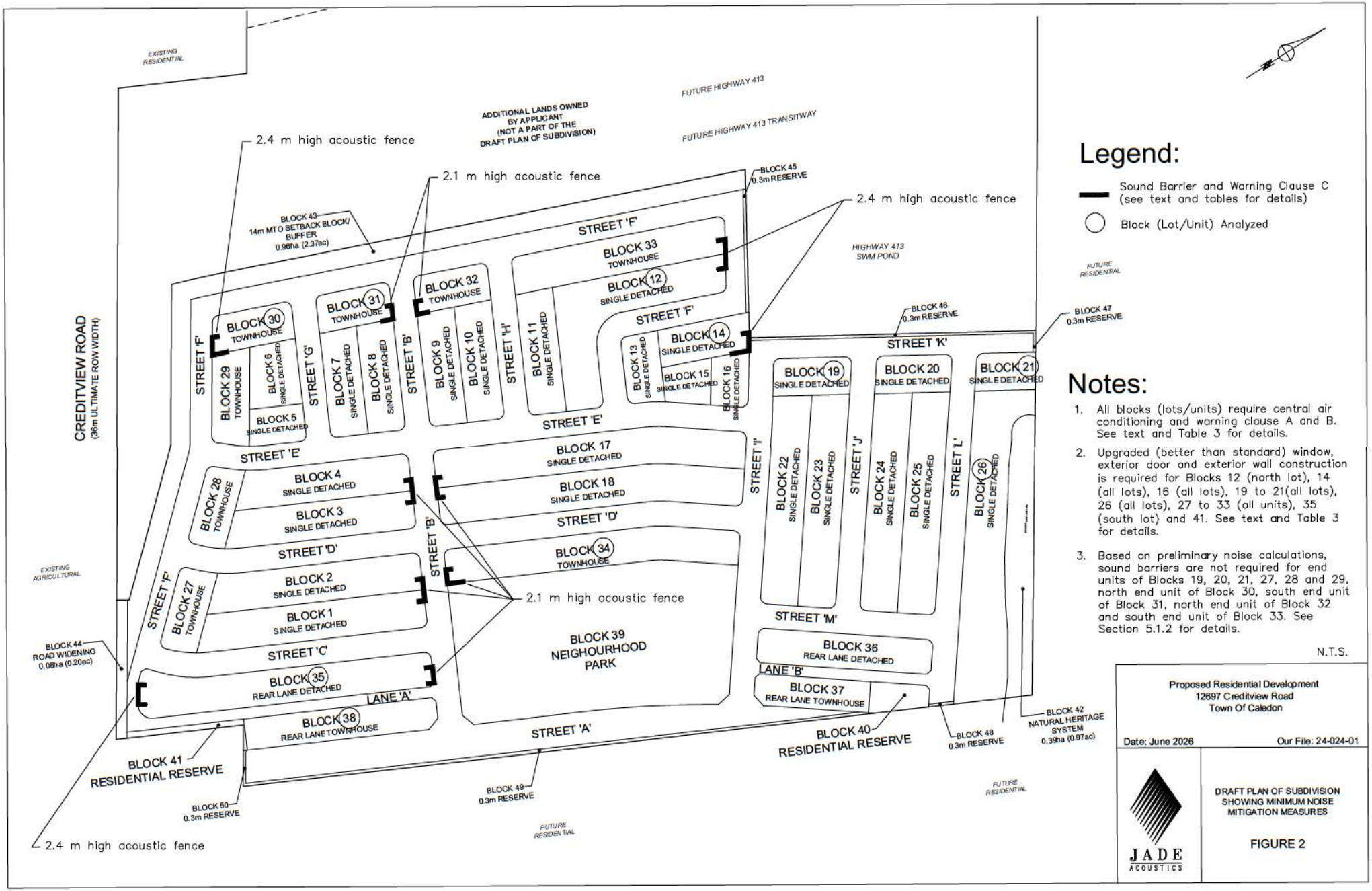
Proposed Residential Development
12697 Creditview Road
Town of Caledon

KEY PLAN

FIGURE 1

Date: June 2026 **File: 24-024-01**

JADE ACOUSTICS



Legend:

- Sound Barrier and Warning Clause C (see text and tables for details)
- Block (Lot/Unit) Analyzed

Notes:

1. All blocks (lots/units) require central air conditioning and warning clause A and B. See text and Table 3 for details.
2. Upgraded (better than standard) window, exterior door and exterior wall construction is required for Blocks 12 (north lot), 14 (all lots), 16 (all lots), 19 to 21(all lots), 26 (all lots), 27 to 33 (all units), 35 (south lot) and 41. See text and Table 3 for details.
3. Based on preliminary noise calculations, sound barriers are not required for end units of Blocks 19, 20, 21, 27, 28 and 29, north end unit of Block 30, south end unit of Block 31, north end unit of Block 32 and south end unit of Block 33. See Section 5.1.2 for details.

N.T.S.

Proposed Residential Development
12697 Creditview Road
Town Of Caledon

Date: June 2026 Our File: 24-024-01

JADE ACOUSTICS

DRAFT PLAN OF SUBDIVISION SHOWING MINIMUM NOISE MITIGATION MEASURES

FIGURE 2

APPENDIX A

CORRESPONDENCE REGARDING ROAD TRAFFIC DATA

TOWN OF CALEDON

Davor Sikic

From: Smeeta Adiga <Smeeta.Adiga@caledon.ca>
Sent: April 16, 2026 3:37 PM
To: Davor Sikic
Subject: RE: Road Traffic Data for Creditview Road (Jade File: 24-024-02)
Attachments: 2021- AADT- Creditview Rd btwn Old School and Mayfield RD.pdf; Truck % - Creditview Rd btwn Old school and Mayfield Rd.pdf

Hi Davor,

The AADT data available for Creditview Rd, north of Mayfield Road is from 2021. Please see below for responses to your inquires (in blue text). If you have any further questions, please let me know.

Thanks

Smeeta Adiga
Analyst Traffic
Engineering Public Works & Transportation
Office: 905-584-2272 Extn: 4286
Email: Smeeta.Adiga@caledon.ca

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From: Davor Sikic <davor@jadeacoustics.com>
Sent: Friday, March 20, 2026 10:58 AM
To: Engineering Services <EngineeringServices@caledon.ca>
Subject: Road Traffic Data for Creditview Road (Jade File: 24-024-02)

You don't often get email from davor@jadeacoustics.com. Learn why this is important

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the contents to be safe.

Good morning,

We are in the process of preparing an environmental noise report for the proposed residential development located on the west side of Creditview Road, north of Mayfield Road, in the Town of Caledon.

I would kindly ask for road traffic data for Creditview Road north of Mayfield Road. The following information is required:

- ultimate AADT (Average Annual Daily Traffic volume);- Attached
- projected growth if available; - Not available

- number of lanes; - 2 lanes (one direction each)
- percentage of trucks; - Attached
- ratio of medium trucks to heavy trucks; - Attached
- day/night traffic split; - Not available
- posted speed limit; - 60 km/hr
- gradient of the road; - Not available
- right-of-way width; and : 36 m
- any other pertinent information.

If there are any questions, please contact me.

Thank you.

Davor Sikic, P. Eng.
Jade Acoustics Inc.
411 Confederation Parkway Unit 19
Concord, ON L4K 0A8
Office: 905-660-2444 x 235
Direct Line: 905-660-5415
F: 905-660-4110
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Volume by Day Report

Location: CREDITVIEW RD btwn OLD SCHOOL RD & MAYFIELD RD **Municipality:** Caledon

Start Date: 2021-09-11 **End Date:** 2021-09-18 **Geo ID:** 5317

Start Hour	2021-09-11	2021-09-12	2021-09-13	2021-09-14	2021-09-15	2021-09-16	2021-09-17	Grand Total
0	33	36	19	17	16	14	13	148
1	17	19	8	7	4	2	2	59
2	13	7	3	3	4	2	2	34
3	8	6	7	8	3	3	6	41
4	14	12	9	18	15	15	10	93
5	24	11	37	38	30	30	38	208
6	38	28	100	84	87	110	98	545
7	56	47	126	155	150	176	126	836
8	86	82	147	151	132	161	134	893
9	124	82	101	122	121	143	111	804
10	131	106	123	115	112	127	106	820
11	164	124	109	107	142	124	126	896
12	163	132	112	113	137	134	111	902
13	141	130	111	107	109	150	121	869
14	154	154	135	141	134	117	158	993
15	173	150	197	195	213	228	182	1338
16	175	170	217	201	197	197	208	1365
17	163	188	158	178	186	176	182	1231
18	155	175	147	175	148	145	169	1114
19	131	142	92	80	90	91	102	728
20	91	81	74	46	71	66	52	481
21	68	60	37	42	52	41	37	337
22	43	28	23	24	28	24	34	204
23	48	21	15	8	12	27	15	146
Grand Total	2213	1991	2107	2135	2193	2303	2143	15085

Classification Study Report by Vehicle % & Volume

Location: CREDITVIEW RD btwn OLD SCHOOL RD & MAYFIELD RD **Municipality:** Caledon

Start Date: 2021-09-11 0:00 **End Date:** 2021-09-18 0:00 **Geo ID:** 5317

Date	P	M	B	7A-MT	6A-ST	6A-MT	5A-ST	5A-MT	4A-SU	4A-ST	3A-SU	2A-SU	2A-4T	Grand Total
2021-09-11	1657	30	1	5	1	2	1	21	3	6	10	13	463	2213
2021-09-12	1477	20	2	2		3		22	2	6	22	9	426	1991
2021-09-13	1511	41	2	6	4	2	2	35	4	12	26	22	440	2107
2021-09-14	1583	35		3			3	22	3	3	9	19	455	2135
2021-09-15	1616	29	2	8	2	8	3	25	1	7	15	9	468	2193
2021-09-16	1708	29	1	5		5	1	21	8	7	10	15	493	2303
2021-09-17	1586	29	2	11	3	1	2	24	4	10	15	13	443	2143
Grand Total	11138	213	10	40	10	21	12	170	25	51	107	100	3188	15085

Date	P	M	B	7A-MT	6A-ST	6A-MT	5A-ST	5A-MT	4A-SU	4A-ST	3A-SU	2A-SU	2A-4T	Grand Total
2021-09-11	74.88 %	1.36 %	0.05 %	0.23 %	0.05 %	0.09 %	0.05 %	0.95 %	0.14 %	0.27 %	0.45 %	0.59 %	20.92 %	100.00 %
2021-09-12	74.18 %	1.00 %	0.10 %	0.10 %	0.00 %	0.15 %	0.00 %	1.10 %	0.10 %	0.30 %	1.10 %	0.45 %	21.40 %	100.00 %
2021-09-13	71.71 %	1.95 %	0.09 %	0.28 %	0.19 %	0.09 %	0.09 %	1.66 %	0.19 %	0.57 %	1.23 %	1.04 %	20.88 %	100.00 %
2021-09-14	74.15 %	1.64 %	0.00 %	0.14 %	0.00 %	0.00 %	0.14 %	1.03 %	0.14 %	0.14 %	0.42 %	0.89 %	21.31 %	100.00 %
2021-09-15	73.69 %	1.32 %	0.09 %	0.36 %	0.09 %	0.36 %	0.14 %	1.14 %	0.05 %	0.32 %	0.68 %	0.41 %	21.34 %	100.00 %
2021-09-16	74.16 %	1.26 %	0.04 %	0.22 %	0.00 %	0.22 %	0.04 %	0.91 %	0.35 %	0.30 %	0.43 %	0.65 %	21.41 %	100.00 %
2021-09-17	74.01 %	1.35 %	0.09 %	0.51 %	0.14 %	0.05 %	0.09 %	1.12 %	0.19 %	0.47 %	0.70 %	0.61 %	20.67 %	100.00 %
Grand Total	73.83 %	1.41 %	0.07 %	0.27 %	0.07 %	0.14 %	0.08 %	1.13 %	0.17 %	0.34 %	0.71 %	0.66 %	21.13 %	100.00 %

TES www.tes.ca

Rev 29-

Davor Sikic

From: Smeeta Adiga <Smeeta.Adiga@caledon.ca>
Sent: April 16, 2026 4:26 PM
To: Davor Sikic
Subject: RE: Road Traffic Data for Creditview Road (Jade File: 24-024-02)

Hi Davor,

Here is the definition for the bin mappings:

Bin No.	Vehicle Type	Class's Short Name	Class's Full Name
3	Pickup, vans, ambulances, minibuses	2A-4T	Two-Axle, Four-Tire Single Unit
5	Trucks	2A-SU	Two-Axle, Six-Tire Single Unit
6	Trucks	3A-SU	Three-Axle Single Unit
8	Trucks	4A-ST	Four or Fewer Axle Single Trailer
7	Trucks	4A-SU	Four or More Axle Single Unit
11	Trucks	5A-MT	Five or Fewer Axle Multi-Trailer
9	Trucks	5A-ST	Five-Axle Single Trailer
12	Trucks	6A-MT	Six-Axle Multi-Trailer
10	Trucks	6A-ST	Six or More Axle Single Trailer
13	Trucks	7A-MT	Seven or More Axle Multi-Trailer
4	Buses	B	Buses
1	Motorcycles	M	Motorcycles
2	Passenger Cars	P	Passenger Cars

Thanks,

Smeeta Adiga
Analyst Traffic
Engineering Public Works & Transportation
Office: 905-584-2272 Extn: 4286
Email: Smeeta.Adiga@caledon.ca

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From: Davor Sikic <davor@jadeacoustics.com>
Sent: Thursday, April 16, 2026 4:00 PM
To: Smeeta Adiga <Smeeta.Adiga@caledon.ca>
Subject: RE: Road Traffic Data for Creditview Road (Jade File: 24-024-02)

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Hi Smeeta,

Would you be able to send me a description of the vehicle types associated with the classification study report attached to your email below?

C.F. CROZIER & ASSOCIATES INC.

Davor Sikic

From: Aidan Hallsworth <ahallsworth@cfcrozier.ca>
Sent: April 22, 2026 5:19 PM
To: Davor Sikic
Cc: Jake Chong; Alexander Fleming; Michael Linton
Subject: RE: Proposed Residential Development, 12697 Creditview Road, Town of Caledon (Jade File: 24-024-01)
Attachments: MAYFIELD RD & CREDITVIEW RD_2024-04-23.pdf; CREDITVIEW RD & OLD SCHOOL RD_2024-04-23.pdf

Hello Davor,

Thank you for your patience regarding your traffic related questions on 12697 Creditview Road. Please see our responses to your questions in red below.

Please do not hesitate to reach out to us if there are any further questions.

Regards,

Aidan Hallsworth, P.Eng.
Project Engineer, Transportation
Office: 905.693.4712
Collingwood | Burlington | Toronto | Bradford | Guelph

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From: Davor Sikic <davor@jadeacoustics.com>
Sent: April 7, 2026 12:52 PM
To: Alexander Fleming <afleming@cfcrozier.ca>; Michael Linton <mlinton@cfcrozier.ca>
Cc: Jake Chong <jake@jadeacoustics.com>
Subject: Proposed Residential Development, 12697 Creditview Road, Town of Caledon (Jade File: 24-024-01)

Good afternoon Alexander, Michael,

Similar to the project associated with other residential development along Creditview Road, your contact information has been sent to our office by Harry Wessels at GSAI.

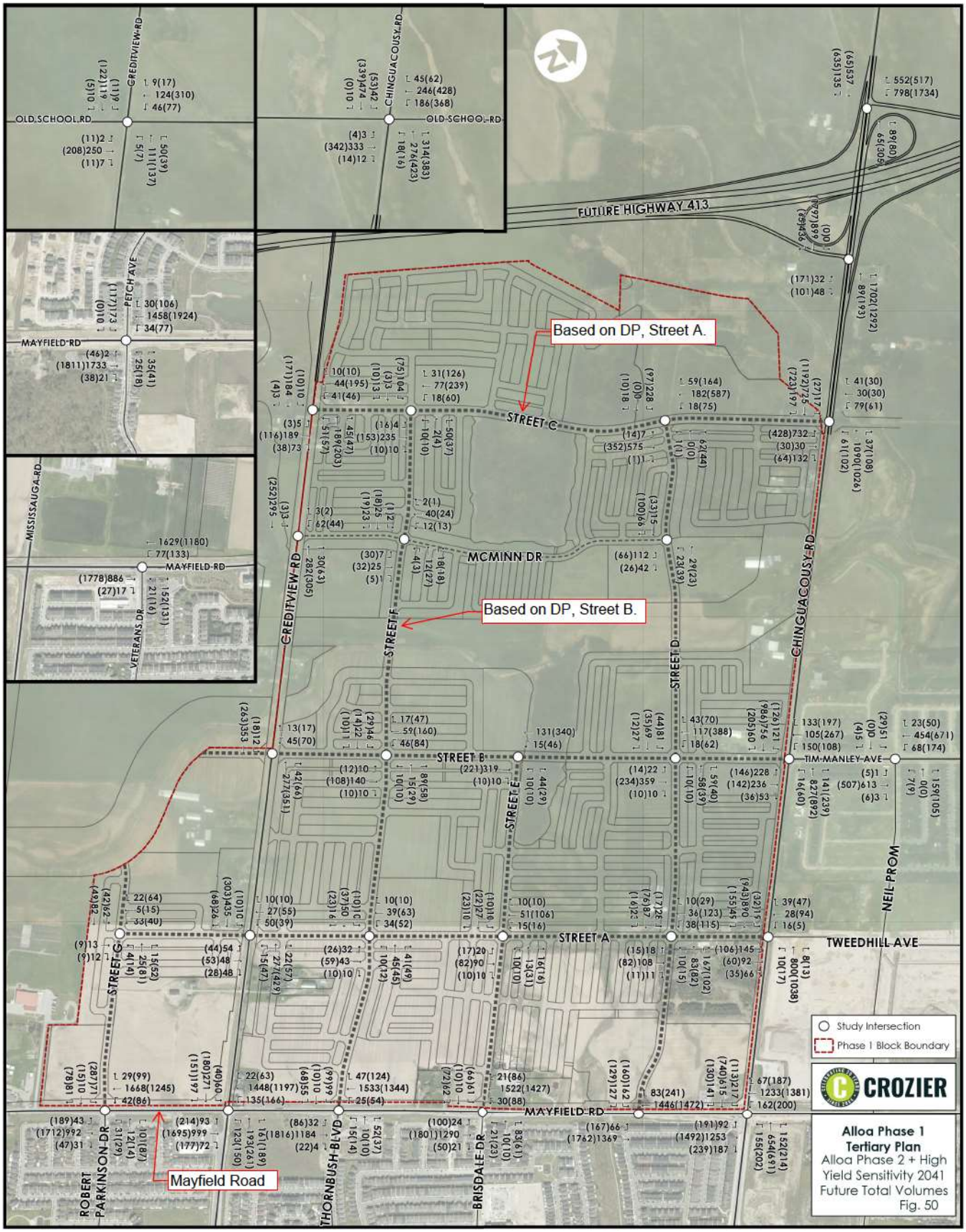
We are in the process of preparing noise calculations and a report for the proposed residential development mentioned in the subject line above. We need road traffic data for the roadways abutting (Creditview Road) and within (Street A and any other collector street) the proposed site.

The following information is required for the roadways mentioned above:

- AADT (or AM/PM peak hour volumes and a factor to convert peak hour volumes to AADTs) projected to a minimum 20 years after the completion of the subject project; Please find an image below of our 2041 Total Volumes (full Alloa Secondary Plan traffic in our sensitivity scenario). AM volume listed first, PM in brackets. If you need 2051 volumes you may conservatively assume a 2% growth rate for through traffic along Creditview Road. This approach will make it conservative as this would also grow the Alloa Secondary Plan traffic, but it should provide a simplified way of forecasting, and traffic volumes are relatively low regardless.



- Posted/expected speed limit; The posted speed Limits can be assumed as follows:
    - Street C (Called Street A in the Draft Plan): 50 km/h.
    - Creditview Road proposed to be 60 km/h per Attachment 2 in Appendix G in the MMTMP
    - Local Roads: 40 km/h
- Percentage of commercial vehicles (medium and heavy trucks); No heavy vehicle projections were completed for internal collectors. You can use typical assumptions as you would for residential areas. On a worst case bases you may assume 2%. Along Creditview, please see attached the turning movement count surveys at Creditview and Mayfield + Creditview and Old School. The HV%s were unadjusted under future conditions assessment (no other survey data on Creditview Road between those intersections, reasonable to assume HV%s remain similar along length of road)
- Medium trucks/heavy trucks ratio; and We don't differentiate between different types of trucks; you will need to use your typical assumptions for this and/or rely upon the attached turning movement count survey.
- Day/night traffic split, if available, where the daytime hours are between 7 am and 11 pm and nighttime hours between 11 pm and 7 am. We don't project this data, as we only have weekday


Based on DP, Street A.
Based on DP, Street B.
Mayfield Road
FUTURE HIGHWAY 413
STREET A
STREET B
STREET C
STREET D
STREET E
STREET F
STREET G
MCMINN DR
TIM-MANLEY-AVE
TWEEDHILL AVE
NEIL-PROM
MAYFIELD-RD
OLD SCHOOL RD
CREDITVIEW-RD
CHINGUACOUSY-RD
MISSISSAUGA-RD
PETCH AVE
VETERANS DR
ROBERT PARKINSON-DR
THORNBUSH BLVD
BRISDALE-DR
Study Intersection
Phase 1 Block Boundary
CROZIER
Alloa Phase 1
Tertiary Plan
Alloa Phase 2 + High Yield Sensitivity 2041
Future Total Volumes
Fig. 50

HIGHWAY 413

This figure was included in the email received from Crozier on April 22, 2026

Speed limit of Highway 413 is expected to be 110km/h

Traffic Volumes from the 2041 AM peak hour TDM

HIGHWAY 413



March 2026 Report

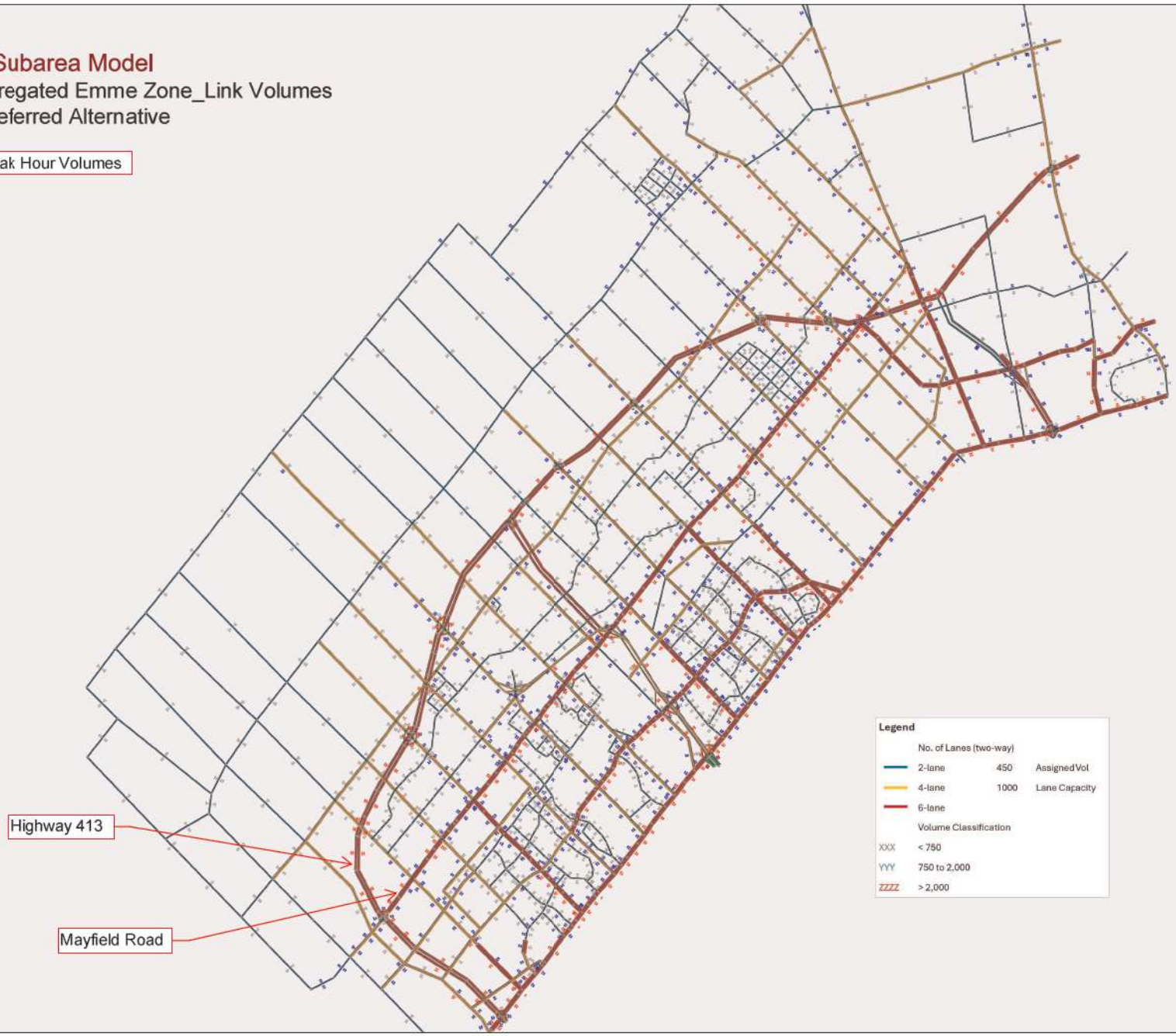
Table 4-1: 2041 Mainline Highway 413 Traffic Volumes

Highway 413 Segment	Direction	2041 AM Peak Hour			2041 PM Peak Hour		
		Total Vehicles	Total Trucks	Truck Percentage (%)	Total Vehicles	Total Trucks	Truck Percentage (%)
Highway 401 to Winston Churchill Boulevard	NB	3482	887	25%	3995	660	17%
	SB	4026	611	15%	3770	693	18%
Winston Churchill Boulevard to Bovaird Drive	NB	4102	893	22%	5441	738	14%
	SB	4894	651	13%	4584	791	17%
Bovaird Drive to Mayfield Road	NB	3358	705	21%	4101	595	15%
	SB	3958	574	15%	3770	670	18%
Mayfield Road to Chinguacousy Road	NB	3240	704	22%	3552	632	18%
	SB	3489	606	17%	3337	726	22%
Chinguacousy Road to Hurontario Street	NB	4206	900	21%	4089	771	19%
	SB	3795	764	20%	4280	906	21%
Hurontario Street to Hwy 410	EB	5092	1090	21%	4049	865	21%
	WB	3894	874	22%	4970	1037	21%
Highway 410 to Bramalea Road	EB	4590	1018	22%	4419	874	20%
	WB	4568	907	20%	4734	1033	22%
Bramalea Road to Airport Road	EB	4395	1006	23%	4500	970	22%
	WB	4101	1031	25%	4801	1102	23%
Airport Road to The Gore Road	EB	4265	965	23%	3817	906	24%
	WB	3907	1002	26%	4565	1080	24%
The Gore Road to Humber Station Road	EB	3860	928	24%	3520	870	25%
	WB	3580	972	27%	4286	1069	25%
Humber Station Road to Hwy 427	EB	4627	1074	23%	4547	982	22%
	WB	4608	1079	23%	5080	1149	23%
Highway 427 to Highway 27	EB	4069	1040	26%	4988	947	19%
	WB	5112	933	18%	4464	1039	23%
Highway 27 to Weston Rd	EB	3666	979	27%	4085	838	21%
	WB	4156	829	20%	4169	996	24%

2051 Subarea Model

Disaggregated Emme Zone_Link Volumes
with Preferred Alternative

AM Peak Hour Volumes



Davor Sikic

From: project_team@highway413.ca
Sent: May 11, 2026 9:10 AM
To: Davor Sikic
Cc: Jake Chong
Subject: RE: Proposed Residential Development, west of Creditview Road and south of future Highway 413, Town of Caledon (Jade File: 24-024-01)

Hello Davor,

Thank you for your interest in the Highway 413 Project.

The Highway 413 Environmental Impact Assessment process has not proposed any noise mitigation at Centreville Creek. MTO has and will consider mitigation measures for developments approved up to November 27, 2025 when the highway was designated under the Public Transportation and Highway Improvement Act. Where approvals were/are received after this date, any noise mitigation would be the responsibility of the developer/others. The Operational Noise Impact Assessment report for Highway 413 will be available online soon and contains traffic volume data for Highway 413 and municipal roads for a scenario in 2041 where the highway is operational.

If you have any other questions or concerns related to Highway 413, please let us know.

Sincerely,

The Highway 413 Project Team
Email: project_team@highway413.ca
Toll-Free: 1-877-522-6916
Website: www.highway413.ca

From: Davor Sikic <davor@jadeacoustics.com>
Sent: Tuesday, April 7, 2026 10:44 AM
To: Highway 413 (project_team@highway413.ca) <project_team@highway413.ca>
Cc: Jake Chong <jake@jadeacoustics.com>
Subject: Proposed Residential Development, west of Creditview Road and south of future Highway 413, Town of Caledon (Jade File: 24-024-01)

Good morning,

Jade Acoustics Inc. is in the process of preparing a preliminary environmental noise report for the proposed residential development located on the west side of Creditview Road, south of the future Highway 413 alignment in the Town of Caledon.

I would kindly ask for the following information that will assist us in the preparation of our noise report:

- Are future residential developments along the proposed Highway 413 route being considered in an EA prepared by the proponent of the future highway in terms of the potential noise impact and mitigation measures, specifically the residential developments in the area mentioned above?

- Would AADT and/or SADT road traffic volumes (ultimate or any projection), percentages of commercial vehicles (medium trucks and heavy trucks), a daytime (7 am to 11 pm)/nighttime (11 pm to 7 am) traffic split (%) and a speed limit be available for Highway 413/Highway 413 Transitway?

If there are any questions, please contact me.

Thank you.

Davor Sikic, P. Eng.
Jade Acoustics Inc.
411 Confederation Parkway Unit 19
Concord, ON L4K 0A8
Office: 905-660-2444 x 235
Direct Line: 905-660-5415
F: 905-660-4110
E: davor@jadeacoustics.com
W: www.jadeacoustics.com

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 (L_{LM}, 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 (L_{LM}, 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	7:00 a.m. – 11:00 p.m.	Leq (16 hr.) = 55 dBA
Outside bedroom window	11:00 p.m. – 7:00 a.m.	Leq (8 hr.) = 50 dBA
Indoor (bedrooms, hospitals)	11:00 p.m. – 7:00 a.m.	Leq (8 hr.) = 40 dBA
Indoor (living rooms, hotels, private offices, reading rooms)	7:00 a.m. – 11:00 p.m.	Leq (16 hr.) = 45 dBA
Indoor (general offices, shops)	7:00 a.m. – 11:00 p.m.	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.

APPENDIX C

SAMPLE CALCULATION OF PREDICTED UNMITIGATED SOUND LEVELS – TRANSPORTATION SOURCES

APPENDIX C-1
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS

FILE: 24-024-01
NAME: 12697 Creditview Road
REFERENCE DRAWINGS: Draft Plan
LOCATION: Block 34 (South Unit), Side (South) Wall, 3rd Storey

Noise Source:	Street B
Time Period:	16 hr. (day)
Segment Angle:	-90 to 90
Distance (m):	11.5

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	61.83
Height and/or Distance Correction (dBA):	-2.78
Finite Element Correction (dBA):	-1.17
Volume Correction (dBA):	-3.00
Allowance for Additional Distance Correction (dBA):	+4.50
Allowance for Screening (dBA):	0.00
Allowance for Future Growth (dBA):	incl.
LeqDay (dBA):	59.39

* Leq determined using the computerized model of the Ontario Ministry of the Environment and Climate Change Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.

APPENDIX C-2
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS

FILE: 24-024-01
NAME: 12697 Creditview Road
REFERENCE DRAWINGS: Draft Plan
LOCATION: Block 34 (South Unit), Side (South) Wall, 3rd Storey

Noise Source:	Street B
Time Period:	8 hr. (night)
Segment Angle:	-90 to 90
Distance (m):	11.5

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	55.37
Height and/or Distance Correction (dBA):	-2.77
Finite Element Correction (dBA):	-1.17
Volume Correction (dBA):	-3.00
Allowance for Additional Distance Correction (dBA):	+4.50
Allowance for Screening (dBA):	0.00
Allowance for Future Growth (dBA):	incl.
LeqDay (dBA):	52.93

* Leq determined using the computerized model of the Ontario Ministry of the Environment and Climate Change Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.

```
STAMSON 5.0        NORMAL REPORT        Date: 03-06-2026 09:48:47
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 34wusw.te              Time Period: Day/Night 16/8 hours
Description: Block 34, south townhouse unit, side wall

Road data, segment # 1: Street B (day/night)
----------------------------------------
Car traffic volume  :  5116/568   veh/TimePeriod  *
Medium truck volume :    52/6     veh/TimePeriod  *
Heavy truck volume  :    52/6     veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   5800 (actual volume 2900)
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Street B (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  :  23.00 / 23.00  m (actual distance 11.50 m)
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: Street B (day)
-----------------------------------

Source height = 1.00 m

ROAD (0.00 + 57.89 + 0.00) = 57.89 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.50  61.83   0.00  -2.78  -1.17   0.00   0.00   0.00  57.89
-------------------------------------------------------------------------------

Segment Leq : 57.89 dBA - 3.00 dBA (volume correction) + 4.50 dBA (distance correction) =
59.39 dBA

Total Leq All Segments: 57.89 dBA (59.39 dBA with volume and distance corrections)
```

```
Results segment # 1: Street B (night)
-------------------------------------

Source height = 1.01 m

ROAD (0.00 + 51.43 + 0.00) = 51.43 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.49  55.37   0.00  -2.77  -1.17   0.00   0.00   0.00  51.43
-------------------------------------------------------------------------------

Segment Leq : 51.43 dBA - 3.00 dBA (volume correction) + 4.50 dBA (distance correction) =
52.93 dBA

Total Leq All Segments: 51.43 dBA (52.93 dBA with volume and distance corrections)


TOTAL Leq FROM ALL SOURCES (DAY): 57.89 (59.39 with volume and distance corrections)
                           (NIGHT): 51.43 (52.93 with volume and distance corrections)
```

APPENDIX C-3
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS

FILE: 24-024-01
NAME: 12697 Creditview Road
REFERENCE DRAWINGS: Draft Plan
LOCATION: Block 34 (South Unit), Rear Yard

Noise Source:	Street A	Street B
Time Period:	16 hr. (day)	16 hr. (day)
Segment Angle:	-62 to 17	-90 to 45
Distance (m):	120.5	15.0

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	63.47	61.83
Height and/or Distance Correction (dBA):	-15.02	0.00
Finite Element Correction (dBA):	-4.05	-2.29
Volume Correction (dBA):	0.00	-3.00
Allowance for Screening (dBA):	0.00	0.00
Allowance for Future Growth (dBA):	incl.	incl.
LeqDay (dBA):	44.40	56.54
Combined LeqDay (dBA):	56.80	

* Leq determined using the computerized model of the Ontario Ministry of the Environment and Climate Change Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.

```
STAMSON 5.0        NORMAL REPORT        Date: 02-06-2026 16:04:14
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 34wury.te            Time Period: Day 16 hours
Description: Block 34, south unit, rear yard, unmitigated

Road data, segment # 1: Street A (day)
---------------------------------------
Car traffic volume  :  7453 veh/TimePeriod  *
Medium truck volume :    76 veh/TimePeriod  *
Heavy truck volume  :    76 veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   8450
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Street A (day)
---------------------------------------
Angle1   Angle2           : -62.00 deg   17.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 120.50 m
Receiver height           :   1.50 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -62.00 deg   Angle2 : 17.00 deg
Barrier height            :   0.00 m
Barrier receiver distance :   3.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.50 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00

Road data, segment # 2: Street B (day)
---------------------------------------
Car traffic volume  :  5116 veh/TimePeriod  *
Medium truck volume :    52 veh/TimePeriod  *
Heavy truck volume  :    52 veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   5800 (actual volume 2900)
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 2: Street B (day)
------------------------------------
Angle1   Angle2           : -90.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  15.00 m
Receiver height           :   1.50 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 45.00 deg
Barrier height            :   0.00 m
Barrier receiver distance :   5.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.50 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00

Results segment # 1: Street A (day)
-----------------------------------

Source height = 1.00 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.00 !        1.50 !        1.98 !         1.98

ROAD (0.00 + 44.40 + 0.00) = 44.40 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -62     17   0.66  63.47   0.00 -15.02  -4.05   0.00   0.00   0.00  44.40*
   -62     17   0.66  63.47   0.00 -15.02  -4.05   0.00   0.00   0.00  44.40
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 44.40 dBA

Results segment # 2: Street B (day)
-----------------------------------

Source height = 1.00 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.00 !        1.50 !        1.63 !         1.63

ROAD (0.00 + 59.54 + 0.00) = 59.54 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     45   0.66  61.83   0.00   0.00  -2.29   0.00   0.00  -0.15  59.39*
   -90     45   0.66  61.83   0.00   0.00  -2.29   0.00   0.00   0.00  59.54
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 59.54 dBA - 3.00 dBA (volume correction) = 56.54 dBA

Total Leq All Segments: 59.67 dBA (56.80 dBA with volume correction)
```

APPENDIX D

SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION

APPENDIX D-1
SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION*

FILE: 24-024-01
NAME: 12697 Creditview Road
REFERENCE DRAWINGS: Draft Plan
LOCATION: Block 31 (North Unit), 3rd Floor, daytime

ROAD

Room:	Corner Bedroom		
Exterior Wall area as a percentage of floor area:		West:	55%
		North:	55%
Window/Exterior Door area as a percentage of floor area:		West:	25%
		North:	25%
Number of components:	4		
Outdoor Daytime Leq (dBA):	West:	70 (+3 for reflections) = 73	
	North:	67 (+3 for reflections) = 70	
Indoor Leq (dBA):	40		
Noise Reduction (dBA):	West:	33	
	North:	30	
Noise Spectrum:	**Mixed Road and Distant Aircraft**		
Absorption:	Intermediate		

APPROPRIATE ELEMENTS

		STC Rating
Exterior Wall	West	STC 45
	North	STC 42
Window/ Exterior Door	West	STC 36
	North	STC 33

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

APPENDIX E

SAMPLE CALCULATION OF SOUND BARRIER ANALYSIS

```
STAMSON 5.0        NORMAL REPORT        Date: 02-06-2026 16:04:14
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 34wury.te            Time Period: Day 16 hours
Description: Block 34, south unit, rear yard, mitigated

Road data, segment # 1: Street A (day)
---------------------------------------
Car traffic volume  :  7453 veh/TimePeriod  *
Medium truck volume :    76 veh/TimePeriod  *
Heavy truck volume  :    76 veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   8450
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Street A (day)
---------------------------------------
Angle1   Angle2           : -62.00 deg   17.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 120.50 m
Receiver height           :   1.50 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -62.00 deg   Angle2 : 17.00 deg
Barrier height            :   0.00 m
Barrier receiver distance :   3.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.50 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00

Road data, segment # 2: Street B (day)
---------------------------------------
Car traffic volume  :  5116 veh/TimePeriod  *
Medium truck volume :    52 veh/TimePeriod  *
Heavy truck volume  :    52 veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   5800 (actual volume 2900)
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 2: Street B (day)
-----------------------------------
Angle1   Angle2           : -90.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  15.00 m
Receiver height           :   1.50 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 45.00 deg
Barrier height            :   0.00 m
Barrier receiver distance :   5.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.50 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00

Results segment # 1: Street A (day)
-----------------------------------

Source height = 1.00 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.00 !        1.50 !        1.98 !         1.98

ROAD (0.00 + 44.40 + 0.00) = 44.40 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -62     17   0.66  63.47   0.00 -15.02  -4.05   0.00   0.00   0.00  44.40*
   -62     17   0.66  63.47   0.00 -15.02  -4.05   0.00   0.00   0.00  44.40
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 44.40 dBA

Results segment # 2: Street B (day)
-----------------------------------

Source height = 1.00 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.00 !        1.50 !        1.63 !         1.63

ROAD (0.00 + 59.54 + 0.00) = 59.54 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     45   0.66  61.83   0.00   0.00  -2.29   0.00   0.00  -0.15  59.39*
   -90     45   0.66  61.83   0.00   0.00  -2.29   0.00   0.00   0.00  59.54
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 59.54 dBA - 3.00 dBA (volume correction) = 56.54 dBA


Total Leq All Segments: 59.67 dBA (56.80 dBA with volume correction)
```

Barrier table for segment # 1: Street A (day)

Barrier Height	Elev of Barr Top	Road dBA	Tot Leq dBA	
1.50	1.50	44.40	44.40	
1.60	1.60	44.40	44.40	
1.70	1.70	44.40	44.40	
1.80	1.80	44.40	44.40	
1.90	1.90	44.40	44.40	
2.00	2.00	40.41	40.41	
2.10	2.10	40.36	40.36	2.1 m high acoustic fence
2.20	2.20	40.16	40.16	
2.30	2.30	39.83	39.83	
2.40	2.40	39.41	39.41	
2.50	2.50	38.91	38.91	
2.60	2.60	38.37	38.37	
2.70	2.70	37.80	37.80	
2.80	2.80	37.22	37.22	
2.90	2.90	36.65	36.65	

Barrier table for segment # 2: Street B (day)

Barrier Height	Elev of Barr Top	Road dBA	Tot Leq dBA	
1.50	1.50	59.54	59.54	
1.60	1.60	59.54	59.54	
1.70	1.70	54.62	54.62	
1.80	1.80	54.50	54.50	
1.90	1.90	54.29	54.29	
2.00	2.00	53.99	53.99	
2.10	2.10	53.62	53.62	2.1 m high acoustic fence (50.62 volume corr.)
2.20	2.20	53.20	53.20	
2.30	2.30	52.75	52.75	
2.40	2.40	52.29	52.29	
2.50	2.50	51.81	51.81	
2.60	2.60	51.34	51.34	
2.70	2.70	50.88	50.88	
2.80	2.80	50.43	50.43	
2.90	2.90	49.99	49.99	

Combined LeqDay with 2.1 m high acoustic fence = 51.01 dBA