

February 2, 2026

Lohrer Contracting Ltd.
78 Glenhuron Drive
Barrie, Ontario
L4M 6T4

Attention: David Mayer

VIA E-MAIL
dave@lohrerltd.com

Re: Environmental Noise Report
Proposed Residential Lot Severance
1043 Pine Grove Road
Town of Penetanguishene
Our File: 24-163



As requested, Jade Acoustics Inc. has reviewed the potential impact of environmental noise on the west portion of the residential lot at 1043 Pine Grove Road to the satisfaction of the Town of Penetanguishene. The west portion is proposed to be a severed parcel of the subject land becoming a separate residential lot. This report is prepared for a variance application.

As requested by the Town of Penetanguishene, the report addresses Huronia Hand Gun Club located northeast of the subject site. For completeness, the potential impact of transportation and other potential stationary noise sources has been investigated and included in the report.

1.0 Introduction

The proposed site is identified as:

Plan 51R-21920
Part of Lot 77B,
Registered Plan 69
Township of Tay
County of Simcoe

The subject residential lot is located on the south side of Pine Grove Road east of Fuller Avenue. The surrounding land uses are mainly residential. The Huronia Hand Gun Club facility is located approximately 500 m from the subject site.

The new residential dwelling to be constructed on the severed parcel is expected to be a two-storey house.



Figure 1 shows a Key Plan. Figure 2 shows a site severance plan.

In preparing this report, the following information has been used:

- Plan of survey prepared by James W. Nicholson Limited, dated March 13, 1991, provided by Lohrer Contracting Inc. on October 9, 2024;
- Site severance plan dated August 7, 2024, provided by Lohrer Contracting Inc. on October 9, 2024;
- Noise Attenuation (Gun Club) report prepared by Thornton Tomasetti, dated September 14, 2022, provided by the Town of Penetanguishene on November 4, 2024;
- Shooting Noise Assessment prepared by EXP Services Inc. dated February 15, 2024, provided by the Town of Penetanguishene on November 4, 2024;
- Traffic Impact Study prepared by JD Northcote Engineering Inc., dated November 22, 2018, provided by the Town of Penetanguishene on November 4, 2024;
- Traffic Impact Study prepared by JD Northcote Engineering Inc., dated August 9, 2023, provided by the Town of Penetanguishene on November 4, 2024; and
- Site visit conducted by Jade Acoustic Inc. staff on November 12, 2024.

On January 29 and 30, 2026, the proponent and the planner at MHBC confirmed that the plans and documents listed above are the latest information available for the subject residential lot severance.

2.0 Noise Sources

Transportation Sources

The noise source of potential impact on the proposed residential development is road traffic on Pine Grove Road and Fuller Avenue.

Both traffic impact studies mentioned above were reviewed and information in the studies compared to determine the applicable road traffic volumes. The higher road traffic volumes were calculated using the November 22, 2018 traffic impact study and accounted for in the noise calculations. A 2018 total future traffic information expressed as AM and PM peak hour volumes was used to determine the 2034 AADT volumes for



Pine Grove Road and Fuller Avenue. The 2034 AADT volumes were calculated by multiplying the AM or PM peak hour volume, whichever is higher, with a factor of 10 and applying a yearly increase of 2%. The 2034 AADT volumes were considered applicable to the year 2036 (10-year projection) and, as such, accounted for in the noise calculations.

As per the traffic impact studies, posted speed limits of 60 km/hr and 50 km/h were used for Fuller Avenue and Pine Grove Road, respectively.

Information regarding the percentage of trucks was based on the turning movement count (TMC) data included in the traffic impact studies.

A typical day/night traffic split of 90%/10% was used for both roadways.

A summary of the road traffic data used for the noise calculations is provided in the table included in Section 4.0. Excerpts from the traffic studies relating to the road traffic volumes are included in Appendix A.

The site is not impacted by rail or aircraft traffic.

Stationary Sources

As mentioned above, Huronia Hand Gun Club is located approximately 500 m northeast from the subject site. The municipal address of the club is 1145 Pine Grove Road.

According to the two noise reports mentioned above, shootings take place during daytime hours only. The majority of firearms discharged in the gun club are hand guns. The club is no longer accepting new members for high power rifle and shotgun shooting. Some older members have grandfathered high power rifle and shotgun privileges. Therefore, based on the two noise reports mentioned above, these two types of firearms are still discharged but restricted to 20 shots per day each from 1:00 p.m. to 5:00 p.m.

All shootings take place inside the one-storey roofed gun club building which opens in a southerly direction with the shooting range surrounded by earthen berms (backstops) approximately 3 m to 4 m tall. The berm on the west side extends to Pine Grove Road.

Section 4.0 includes details of the noise assessment prepared for the gun club.

A Central North Correctional Centre facility is located approximately 520 m north of the severed parcel with many intervening residential properties. Due to the separation distance and type of noise sources/activities, the facility is not anticipated to be acoustically insignificant at 1043 Pine Grove Road and, as such, not considered further in the report.



A Fuller Pit facility is positioned approximately 850 m south of the subject site, on the east side of Fuller Avenue. Based on the separation distance, the operations and equipment associated with the pit are not expected to be acoustically significant at the severed parcel. In addition, as there are intervening residential uses, the pit is required to meet the applicable sound level limits at the noise sensitive uses located closer to the pit facility and, as such, should be in compliance at 1043 Pine Grove Road. Therefore, physical noise mitigation measures within the pit to be implemented by the proponent of the subject severance are not required. The Fuller Pit facility is not addressed further in the report.

There are other institutional, commercial and industrial uses located south of the subject site, on the west side of Fuller Avenue at distances exceeding 850 m. Due to the separation distances, these facilities are not acoustically significant and, as such, not addressed further in the report.

3.0 Environmental Noise Guidelines

Transportation Sources

The environmental noise criteria used to assess the impact of noise on proposed developments in Ontario are based on the criteria defined by the Ontario Ministry of the Environment, Conservation and Parks (MECP).

The MOE 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 for the analysis.

The Town of Penetanguishene follows the MECP environmental noise criteria which are summarized below.

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 greater than 60 dBA 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 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 or equal to 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. A warning clause advising the occupant of the potential interference with some activities is also required.

In all cases, air cooled condenser units must meet the requirements included in the MECP publication NPC-216. Generally, an AHRI sound rating of 7.6 bels should not be exceeded. 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 MECP, the indoor noise 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 dBA (Leq16hour) for the living/dining rooms and bedrooms during daytime hours. These criteria are used to determine the architectural requirements.

For the outdoor amenity areas, a design goal of 55 dBA (Leq16hour) for the daytime period between 7:00 a.m. to 11:00 p.m. is used for road traffic. Where the unmitigated sound levels during the day exceed 55 dBA but are less than 60 dBA, a warning clause is required and mitigation should be considered. Approval authorities, in some cases, may accept an excess of up to 5 dBA above the limit (55 dBA) with no mitigation measures. Where the unmitigated daytime 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 subdivision agreement.

Stationary Sources

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

The MOE 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.

There are no sources of vibration affecting the proposed residential lot severance.

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





For the Class 2 area, considered to be applicable to the subject site, the MECP guidelines require that the sound level due to the stationary source not exceed the ambient sound level due to road traffic in any hour of operation, or the values of 50 dBA between 7:00 a.m. and 7:00 p.m. applicable to any location on the premises of a person including outdoor areas and the plane of any window, 50 dBA between 7:00 p.m. and 11:00 p.m. applicable to the plane of any window, 45 dBA between 7:00 p.m. and 11:00 p.m. applicable to outdoor areas and 45 dBA between 11:00 p.m. and 7:00 a.m. applicable to the plane of any open window but not to outdoor areas, whichever is higher.

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 mitigative measures are required. In addition, a warning clause in offers of purchase and sale and/or lease agreement noting the proximity of houses to such a source should be considered. Treatment of the receptor building by the use of suitable wall and window/exterior door construction and central air conditioning to keep windows and exterior doors closed is not an acceptable solution to the MECP in Class 1 and 2 areas (urban).

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.

Noise By-law

The Town of Penetanguishene By-law Number 2011-66, as amended by By-law 2013-49 revised September 29, 2013, regulate and prohibit noises within the Town. The by-law does not provide specific sound level limits but rather provides qualitative information with respect to sources and prohibitions by time and place.

4.0 Noise Impact Assessment

Transportation Sources

For road traffic noise, the sound levels in terms of Leq, the energy equivalent continuous sound level for both day (Leq16hour, daytime) and night (Leq8hour, nighttime) were determined using the MECP Traffic Noise Prediction Model (ORNAMENT).



The following road traffic data was used in the calculations:

Road	Fuller Avenue	Pine Grove Road
AADT*	8,600 (2034)**	1,360 (2034)*
No. of Lanes	2***	2***
Posted Speed (km/h)	60***	50***
Trucks (%)	0.75**	0.0**
Medium/Heavy Split (%)	1.00**	5.00**
Gradient (%)	Up to 2 [#]	Up to 2 [#]
Day/Night Split (%)	90/10 ^{##}	90/10 ^{##}
Right-of-Way (m)	-	-

- * Annual Average Daily Traffic. Considered to be applicable to the year 2036 (10-year projection).
- ** Determined using information included in the Traffic Impact Studies prepared by JD Northcote Engineering Inc.
- *** Based on information included in the Traffic Impact Studies prepared by JD Northcote Engineering Inc.
- # Based on Google Earth
- ## Typically used

For the severed parcel located within the west portion of the subject residential lots, assuming a front wall setback of 6.0 m (conservative), the unmitigated daytime sound level in the rear yard is predicted to be 54 dBA. The unmitigated daytime and nighttime sound levels at the front wall are predicted to be 56 dBA and 50 dBA, respectively. Appendix B includes sample calculations.

Stationary Sources

Our noise assessment of the shooting activities at the Huronia Hand Gun Club facility was based on the review of sound measurements, results of impulsive noise calculations and recommendations included in two noise reports prepared by other noise consultants for residential developments in the area of the proposed residential lot severance. These reports are referred to in Section 1.0.

We also consulted the Club's web site for additional information. Based on a 2019 Revised Edition of the Huronia Hand Gun Club Safety and Orientation Course Guide, members must have executive approval or a large rifle endorsement on their membership cards to shoot high power rifles. The use of high power rifles and shotguns is restricted due to noise concerns. They can only be shots from 1:00 p.m. to 7:00 p.m. limited to 20 shots per day per authorized member. High power

rifles are defined as any rifles that fire a cartridge that is not commonly found in a handgun. High power shotguns are any shotguns larger than a 410 gauge.

The Noise Attenuation (Gun Club) report dated September 14, 2022 was prepared by Thornton Tomasetti for the residential development at 1145 Fuller Avenue located immediately south of the subject site.

The Shooting Noise Assessment report dated February 15, 2024 was prepared by EXP Services Inc. for the residential development at 1255 Fuller Avenue located approximately 200 m north of the subject site.

Both noise reports discuss results of the sound measurements conducted at the gun club and within the area of the proposed residential developments.

According to the September 14, 2022 report, the measurements included a 9 mm pistol as it was discharged. High power rifle and/or shotgun shootings were not measured as discharge of these firearms is considered to be infrequent due to the information available on the club's web site.

Based on the impulsive noise modelling/prediction results included in the September 14, 2022 report, noise impacts at the proposed residential lot severance from pistol use at the gun club are anticipated to be at or below the exclusionary limit of 50 dBAI.

According to the February 15, 2024 report, the measurements included a .22 pistol, a 9 mm handgun, a .357 handgun and a shotgun. The loudest firearm being discharged at the gun club was the .357 handgun.

Based on the impulsive noise modelling of .357 handgun discharge and prediction results included in the February 15, 2024, noise impacts at the subject site are anticipated to exceed 50 dBAI. The discharge of any other firearms, excluding high power rifles and shotguns, is expected to be in compliance with the applicable noise guideline.

5.0 Noise Mitigation Measures

Transportation Sources

As the predicted sound level in the rear yard does not exceed the applicable sound level limit discussed in Section 3.0, a sound barrier is not required and, as such, not proposed for the severed parcel.

The predicted daytime sound level at the future dwelling envelope exceeds the applicable sound level limits. Therefore, the severed parcel requires the provision for adding central air conditioning and the following warning clauses:





A. "Purchasers/tenants are advised that despite the inclusion of noise control features in this development area and within the dwelling unit, 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."

B. "Purchasers/tenants are advised that the dwelling unit can be fitted with a central air conditioning system at the owner's option and expense which will enable occupants to keep windows closed if road traffic noise interferes with the indoor activities. If central air conditioning is installed, the air-cooled condenser unit should be installed based on the requirements of the noise and zoning by-laws and be located so as to have the least possible noise impact on outdoor activities of the occupants and their neighbours."

The two warning clauses mentioned above are recommended to be included in all agreements of Offers of Purchase and Sale, and lease/rental agreements.

Standard window, exterior door and exterior wall construction is acoustically satisfactory.

Figure 2 shows the minimum required noise mitigation measures.

Stationary Sources

As shown in Section 4.0, the noise impacts of most of the firearms used within the Huronia Hand Gun Club facility are anticipated to be in compliance with the applicable noise guideline at the proposed residential lot severance.

The only exception is expected to be discharge of a .357 handgun with sound levels at the subject site in excess of 50 dBA. These events are infrequent considering the overall use of all firearms.

As previously noted, the use of high power rifles and shotguns is restricted with respect to the time and number of shots. The use of these firearms is considered to be infrequent too.

Existing residential properties are located closer to the gun club than the proposed site. Therefore, the new noise sensitive receptor, which is the residential lot proposed to be severed, will not be more impacted than the existing residential neighbourhood.

Gun clubs are generally exempt from the MECP Environmental Compliance Approval (ECA) requirements. Even in case the gun club is required to obtain an ECA for its activities, the introduction of a new noise sensitive receptor will not affect the ability of the gun club to obtain an approval as there are existing closer residential properties. The applicable sound level limit will be met at the proposed site with the compliance achieved at the existing noise sensitive receptors.

Based on the above, physical noise mitigation measures to be implemented at the gun club facility by the proponent of the residential lot severance are not warranted and, as such, not proposed.

However, the following warning clause is required and recommended to be included in all agreements of Offers of Purchase and Sale, and lease/rental agreements:

- C. "Purchasers/tenants are advised that due to the proximity of the Huronia Hand Gun Club, shooting noise from the gun club may at times be audible."

It should also be noted that, as discussed above, the severed parcel requires provision for adding central air conditioning. This means that the future residential dwelling must be equipped with a forced air heating system sized to accommodate the addition of central air conditioning at a later date. Therefore, if desired, a homeowner will be able to install central air conditioning equipment that would allow windows to be kept closed which would mitigate potential noise impacts from the gun club activities.

6.0 Conclusion

Based on the assessment, noise impacts from the use of firearms at the Huronia Hand Gun Club on the proposed residential lot severance at 1043 Pine Grove Road are not expected to be significant. Therefore, physical noise mitigation measures at the gun club are not required for the proposed severance to proceed.

As detailed above, the severed parcel requires provision for adding central air conditioning and three warning clauses.

Respectfully submitted,

JADE ACOUSTICS INC.

Per:

Davor Sikic, P.Eng.



Per:

Chris B. Kellar, P.Eng.

Att.





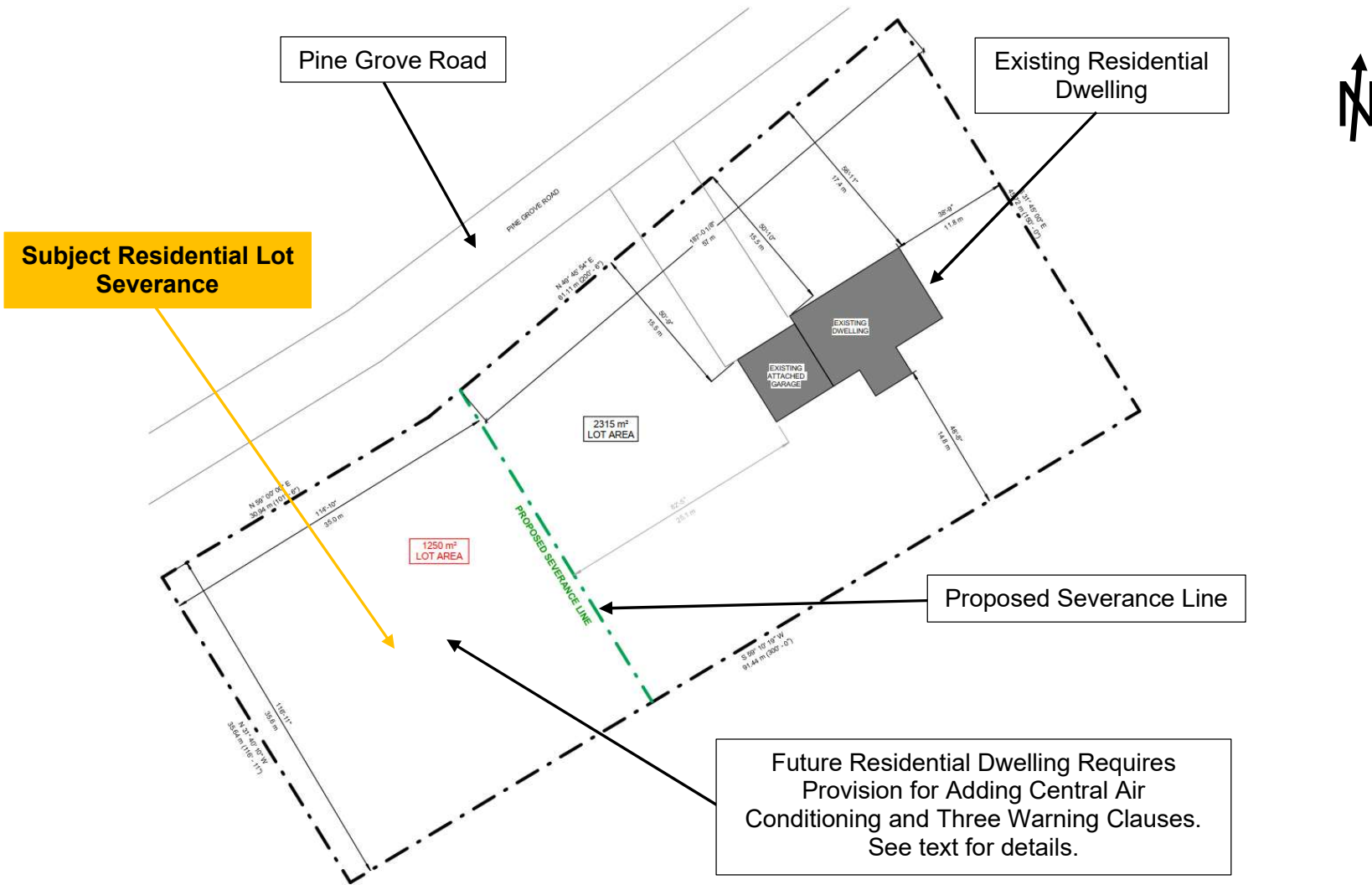
N.T.S.

**Proposed Residential Lot Severance
1043 Pine Grove Road
Town of Penetanguishene**

Date: February 2026 File: 24-163

**KEY PLAN
FIGURE 1**





**Proposed Residential Lot Severance
1043 Pine Grove Road
Town of Penetanguishene**

Date: February 2026

File: 24-163

**SITE SEVERANCE PLAN
SHOWING MINIMUM NOISE
MITIGATION MEASURES**

FIGURE 2





APPENDIX A

EXCERPTS FROM TWO TRAFFIC IMPACT STUDIES

1145 Fuller Avenue

Town of Penetanguishene

Traffic Impact Study for Tonking Management Inc.

Type of Document:
Final Report

Project Number:
JDE – 18077

Date Submitted:
November 22nd, 2018



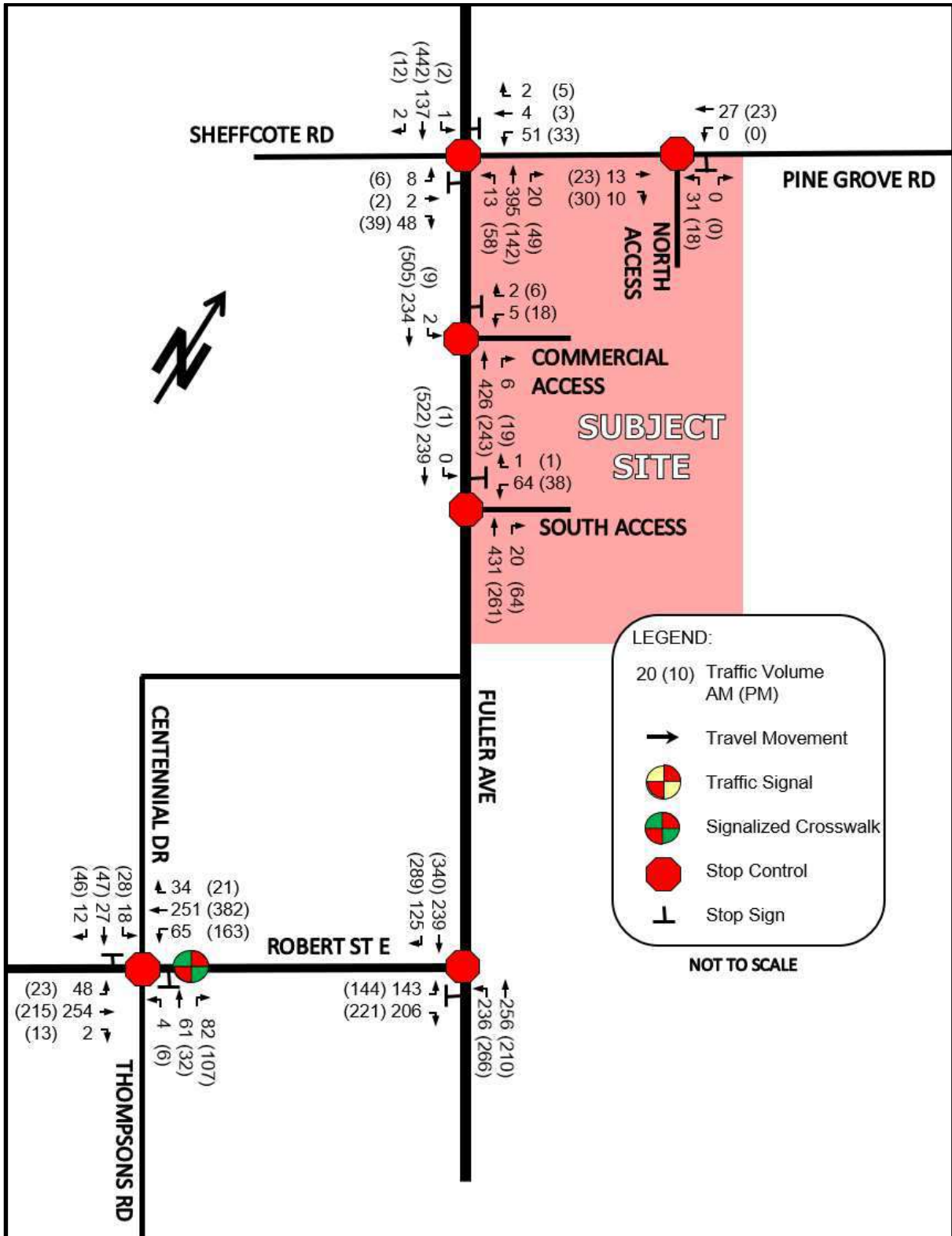
John Northcote, P.Eng.
Professional License #: 100124071



ENGINEERING

JD Northcote Engineering Inc.
86 Cumberland Street
Barrie, ON
705.725.4035
www.JDEngineering.ca

Figure 12 – Total (2028) Traffic Volumes



Accu-Traffic Inc.

Total Count Diagram

Municipality: Penetanguishene
Site #: 1814300001
Intersection: Fuller Ave & Pine Grove Rd
TFR File #: 1
Count date: 6-Nov-18

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Fuller Ave runs N/S

North Leg Total: 1752
North Entering: 896
North Peds: 1
Peds Cross: 

	Heavys	Trucks	Cars	Totals
North	0	7	0	7
East	2	5	0	7
South	15	861	6	882
Totals	17	873	6	



	Heavys	Trucks	Cars	Totals
North	9	10	837	856

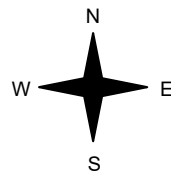
East Leg Total: 141
East Entering: 73
East Peds: 0
Peds Cross: 

Heavys	Trucks	Cars	Totals
3	2	121	126



Sheffcote St

Heavys	Trucks	Cars	Totals
2	0	9	11
1	0	2	3
2	0	119	121
5	0	130	



Fuller Ave



Cars	Trucks	Heavys	Totals
6	0	1	7
2	0	2	4
62	0	0	62
70	0	3	

Pine Grove Rd



Cars	Trucks	Heavys	Totals
64	0	4	68

Peds Cross: 
West Peds: 1
West Entering: 135
West Leg Total: 261

	Cars	Trucks	Heavys	Totals
West	1042	5	9	1056



	Cars	Trucks	Heavys	Totals
West	104	0	1	105
East	822	10	6	838
South	56	0	3	59

Peds Cross: 
South Peds: 1
South Entering: 1002
South Leg Total: 2058

Comments

1255 Fuller Avenue

Town of Penetanguishene

Traffic Impact Study for 1000239074 Ontario Inc.

Type of Document:
Final Report

Project Number:
JDE – 21181

Date Submitted:
August 9th, 2023



A handwritten signature in blue ink, appearing to read 'J.D. Northcote', written over a horizontal line.

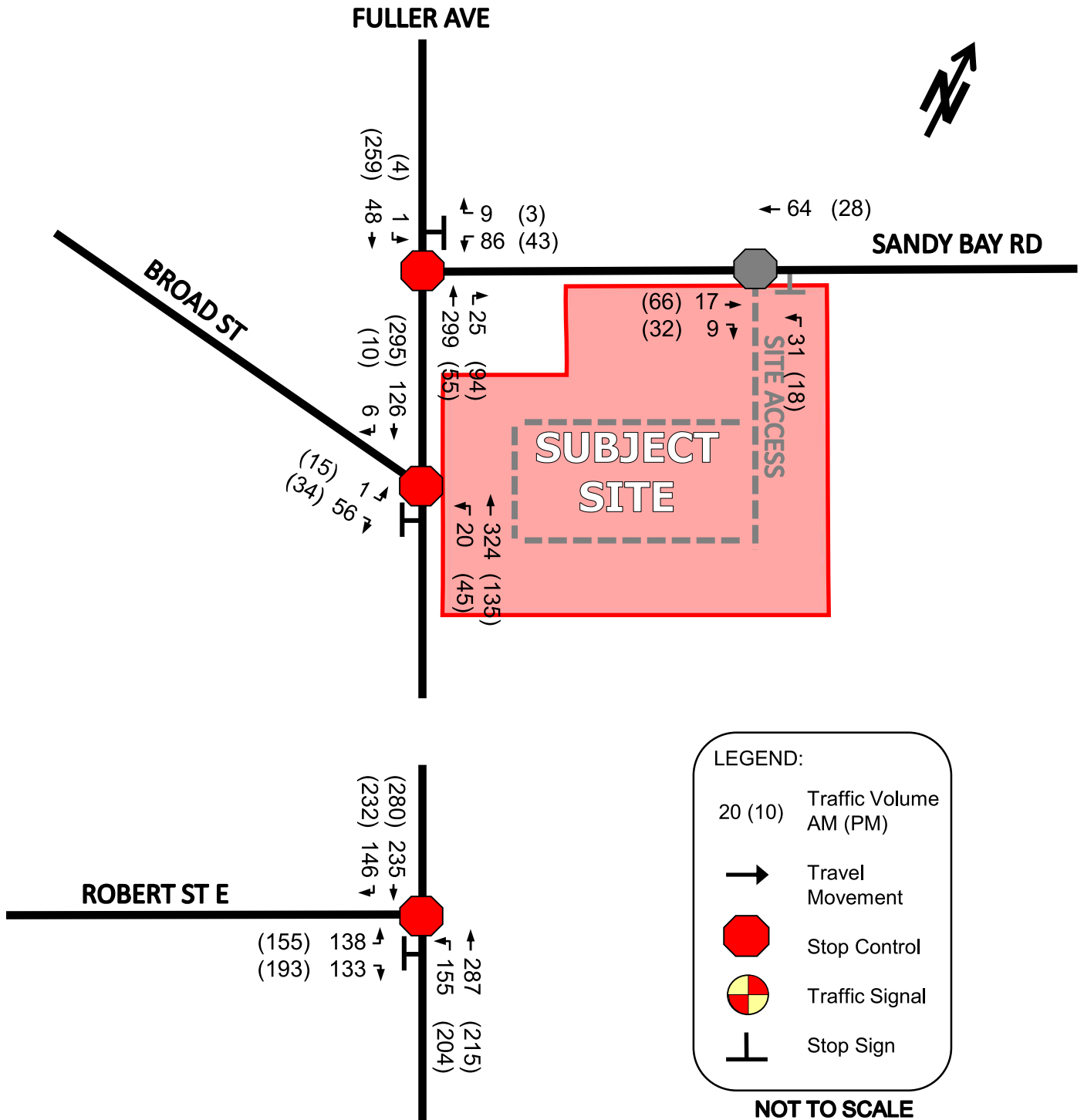
John Northcote, P.Eng.
Professional License #: 100124071



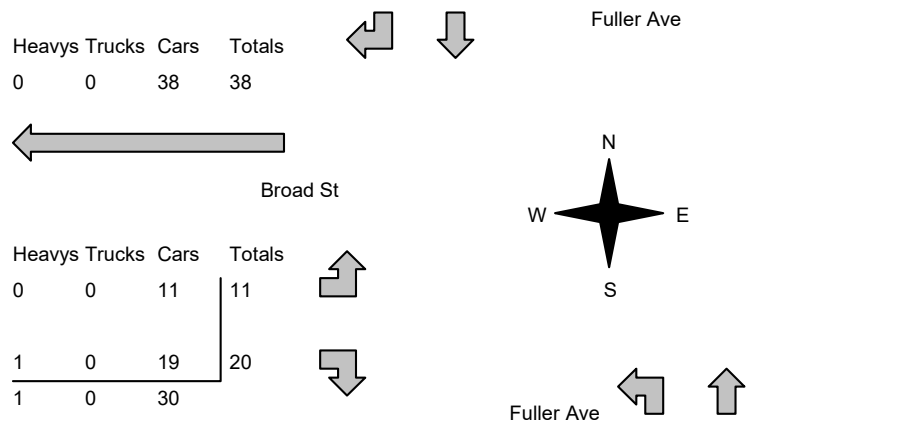
ENGINEERING

JD Northcote Engineering Inc.
86 Cumberland Street
Barrie, ON
705.725.4035
www.JDEngineering.ca

Figure 16 – Total (2035) Traffic Volumes



Morning Peak Diagram	Specified Period From: 7:00:00 To: 10:00:00	One Hour Peak From: 7:15:00 To: 8:15:00																																																																												
Municipality: Penetanguishene Site #: 2300200003 Intersection: Fuller Ave & Broad St TFR File #: 1 Count date: 10-Jan-23	Weather conditions: Person counted: Person prepared: Person checked:																																																																													
** Non-Signalized Intersection **	Major Road: Fuller Ave runs N/S																																																																													
North Leg Total: 329 North Entering: 80 North Peds: 0 Peds Cross: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Heavys 0</td> <td style="width: 33%;">1</td> <td style="width: 33%; border-left: 1px solid black; text-align: right;">1</td> </tr> <tr> <td>Trucks 0</td> <td>1</td> <td style="border-left: 1px solid black; text-align: right;">1</td> </tr> <tr> <td>Cars 4</td> <td>74</td> <td style="border-left: 1px solid black; text-align: right;">78</td> </tr> <tr> <td style="border-top: 1px solid black;">Totals 4</td> <td style="border-top: 1px solid black;">76</td> <td style="border-left: 1px solid black; border-top: 1px solid black; text-align: right;">78</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Heavys 2</td> <td style="width: 33%;"></td> <td style="width: 33%; border-left: 1px solid black; text-align: right;">2</td> </tr> <tr> <td>Trucks 5</td> <td></td> <td style="border-left: 1px solid black; text-align: right;">5</td> </tr> <tr> <td>Cars 242</td> <td></td> <td style="border-left: 1px solid black; text-align: right;">242</td> </tr> <tr> <td style="border-top: 1px solid black;">Totals 249</td> <td style="border-top: 1px solid black;"></td> <td style="border-left: 1px solid black; border-top: 1px solid black; text-align: right;">249</td> </tr> </table>	Heavys 0	1	1	Trucks 0	1	1	Cars 4	74	78	Totals 4	76	78	Heavys 2		2	Trucks 5		5	Cars 242		242	Totals 249		249	N W E S Fuller Ave Broad St Fuller Ave <table style="width: 20%; border-collapse: collapse;"> <tr><td>Heavys</td><td>Trucks</td><td>Cars</td><td>Totals</td></tr> <tr><td>1</td><td>0</td><td>14</td><td>15</td></tr> </table> <table style="width: 20%; border-collapse: collapse;"> <tr><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>1</td><td>0</td><td>36</td><td>37</td></tr> <tr><td>1</td><td>0</td><td>37</td><td></td></tr> </table> <table style="width: 20%; border-collapse: collapse;"> <tr><td>Cars 110</td><td></td><td></td><td></td></tr> <tr><td>Trucks 1</td><td></td><td></td><td></td></tr> <tr><td>Heavys 2</td><td></td><td></td><td></td></tr> <tr><td style="border-top: 1px solid black;">Totals 113</td><td></td><td></td><td></td></tr> </table> <table style="width: 20%; border-collapse: collapse;"> <tr><td>Cars 10</td><td>241</td><td></td><td>251</td></tr> <tr><td>Trucks 0</td><td>5</td><td></td><td>5</td></tr> <tr><td>Heavys 1</td><td>2</td><td></td><td>3</td></tr> <tr><td style="border-top: 1px solid black;">Totals 11</td><td style="border-top: 1px solid black;">248</td><td></td><td></td></tr> </table>		Heavys	Trucks	Cars	Totals	1	0	14	15	0	0	1	1	1	0	36	37	1	0	37		Cars 110				Trucks 1				Heavys 2				Totals 113				Cars 10	241		251	Trucks 0	5		5	Heavys 1	2		3	Totals 11	248		
Heavys 0	1	1																																																																												
Trucks 0	1	1																																																																												
Cars 4	74	78																																																																												
Totals 4	76	78																																																																												
Heavys 2		2																																																																												
Trucks 5		5																																																																												
Cars 242		242																																																																												
Totals 249		249																																																																												
Heavys	Trucks	Cars	Totals																																																																											
1	0	14	15																																																																											
0	0	1	1																																																																											
1	0	36	37																																																																											
1	0	37																																																																												
Cars 110																																																																														
Trucks 1																																																																														
Heavys 2																																																																														
Totals 113																																																																														
Cars 10	241		251																																																																											
Trucks 0	5		5																																																																											
Heavys 1	2		3																																																																											
Totals 11	248																																																																													
Peds Cross: West Peds: 0 West Entering: 38 West Leg Total: 53	Peds Cross: South Peds: 0 South Entering: 259 South Leg Total: 372																																																																													
Comments																																																																														

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 19:00:00	One Hour Peak From: 16:00:00 To: 17:00:00																																																	
Municipality: Penetanguishene Site #: 2300200003 Intersection: Fuller Ave & Broad St TFR File #: 1 Count date: 10-Jan-23		Weather conditions: Person counted: Person prepared: Person checked:																																																	
** Non-Signalized Intersection **		Major Road: Fuller Ave runs N/S																																																	
North Leg Total: 319 North Entering: 226 North Peds: 0 Peds Cross: 	<table style="margin: auto;"> <tr> <td>Heavys</td><td>0</td><td>1</td><td>1</td></tr> <tr> <td>Trucks</td><td>0</td><td>0</td><td>0</td></tr> <tr> <td>Cars</td><td>7</td><td>218</td><td>225</td></tr> <tr> <td>Totals</td><td>7</td><td>219</td><td></td></tr> </table>	Heavys	0	1	1	Trucks	0	0	0	Cars	7	218	225	Totals	7	219		<table style="margin: auto;"> <tr> <td>Heavys</td><td>0</td></tr> <tr> <td>Trucks</td><td>1</td></tr> <tr> <td>Cars</td><td>92</td></tr> <tr> <td>Totals</td><td>93</td></tr> </table>	Heavys	0	Trucks	1	Cars	92	Totals	93																									
Heavys	0	1	1																																																
Trucks	0	0	0																																																
Cars	7	218	225																																																
Totals	7	219																																																	
Heavys	0																																																		
Trucks	1																																																		
Cars	92																																																		
Totals	93																																																		
																																																			
<table style="margin: auto;"> <tr> <td>Heavys</td><td>Trucks</td><td>Cars</td><td>Totals</td></tr> <tr> <td>0</td><td>0</td><td>38</td><td>38</td></tr> </table>	Heavys	Trucks	Cars	Totals	0	0	38	38	<table style="margin: auto;"> <tr> <td>Heavys</td><td>Trucks</td><td>Cars</td><td>Totals</td></tr> <tr> <td>0</td><td>0</td><td>11</td><td>11</td></tr> <tr> <td>1</td><td>0</td><td>19</td><td>20</td></tr> <tr> <td>1</td><td>0</td><td>30</td><td></td></tr> </table>	Heavys	Trucks	Cars	Totals	0	0	11	11	1	0	19	20	1	0	30		<table style="margin: auto;"> <tr> <td>Cars</td><td>237</td></tr> <tr> <td>Trucks</td><td>0</td></tr> <tr> <td>Heavys</td><td>2</td></tr> <tr> <td>Totals</td><td>239</td></tr> </table>	Cars	237	Trucks	0	Heavys	2	Totals	239	<table style="margin: auto;"> <tr> <td>Cars</td><td>31</td><td>81</td><td>112</td></tr> <tr> <td>Trucks</td><td>0</td><td>1</td><td>1</td></tr> <tr> <td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr> <td>Totals</td><td>31</td><td>82</td><td></td></tr> </table>	Cars	31	81	112	Trucks	0	1	1	Heavys	0	0	0	Totals	31	82	
Heavys	Trucks	Cars	Totals																																																
0	0	38	38																																																
Heavys	Trucks	Cars	Totals																																																
0	0	11	11																																																
1	0	19	20																																																
1	0	30																																																	
Cars	237																																																		
Trucks	0																																																		
Heavys	2																																																		
Totals	239																																																		
Cars	31	81	112																																																
Trucks	0	1	1																																																
Heavys	0	0	0																																																
Totals	31	82																																																	
Peds Cross:  West Peds: 1 West Entering: 31 West Leg Total: 69	Peds Cross:  South Peds: 0 South Entering: 113 South Leg Total: 352																																																		
Comments																																																			



APPENDIX B

SAMPLE CALCULATIONS OF PREDICTED UNMITIGATED SOUND LEVELS DUE TO ROAD TRAFFIC

Filename: 1043ry.te Time Period: Day 16 hours
Description: 1043 Pine Grove Road severance, rear yard

Road data, segment # 1: Pine Grove (day)

Car traffic volume : 4651 veh/TimePeriod *
Medium truck volume : 0 veh/TimePeriod *
Heavy truck volume : 245 veh/TimePeriod *
Posted speed limit : 50 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): 5440 (actual volume 1360)
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 0.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Pine Grove (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 : 19.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Fuller Ave. (day)

Car traffic volume : 7605 veh/TimePeriod *
Medium truck volume : 58 veh/TimePeriod *
Heavy truck volume : 77 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): 8600
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 0.75
Heavy Truck % of Total Volume : 1.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Fuller Ave. (day)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 180.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Pine Grove (day)

Source height = 1.50 m

ROAD (0.00 + 59.84 + 0.00) = 59.84 dBA

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

-90	45	0.66	63.83	0.00	-1.70	-2.29	0.00	0.00	0.00	59.84
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 59.84 dBA - 6.00 dBA (volume correction) = 53.84 dBA

Results segment # 2: Fuller Ave. (day)

Source height = 1.00 m

ROAD (0.00 + 44.09 + 0.00) = 44.09 dBA

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

-90	90	0.66	63.46	0.00	-17.91	-1.46	0.00	0.00	0.00	44.09
-----	----	------	-------	------	--------	-------	------	------	------	-------

Segment Leq : 44.09 dBA

Total Leq All Segments: 59.95 dBA (54.28 dBA with volume correction)

Filename: 1043fw.te **Time Period:** Day/Night 16/8 hours
Description: 1043 Pine Grove Road severance, front wall

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

Car traffic volume : 4651/517 veh/TimePeriod *
Medium truck volume : 0/0 veh/TimePeriod *
Heavy truck volume : 245/27 veh/TimePeriod *
Posted speed limit : 50 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): 5440 (actual volume 1360)
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 0.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Pine Grove (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 : 16.00 / 16.00 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Fuller Ave. (day/night)

Car traffic volume : 7605/845 veh/TimePeriod *
Medium truck volume : 58/6 veh/TimePeriod *
Heavy truck volume : 77/9 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): 8600
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 0.75
Heavy Truck % of Total Volume : 1.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Fuller Ave. (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 180.00 / 180.00 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Pine Grove (day)

Source height = 1.50 m

ROAD (0.00 + 62.09 + 0.00) = 62.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-90	90	0.57	63.83	0.00	-0.44	-1.30	0.00	0.00	0.00	62.09
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Segment Leq : 62.09 dBA - 6.00 dBA (volume correction) = 56.09 dBA

Results segment # 2: Fuller Ave. (day)

Source height = 1.00 m

ROAD (0.00 + 42.01 + 0.00) = 42.01 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
0	90	0.59	63.46	0.00	-17.11	-4.34	0.00	0.00	0.00	42.01
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Segment Leq : 42.01 dBA

Total Leq All Segments: 62.13 dBA (56.26 dBA with volume correction)

Results segment # 1: Pine Grove (night)

Source height = 1.49 m

ROAD (0.00 + 55.53 + 0.00) = 55.53 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-90	90	0.57	57.27	0.00	-0.44	-1.30	0.00	0.00	0.00	55.53
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Segment Leq : 55.53 dBA - 6.00 dBA (volume correction) = 49.53 dBA

Results segment # 2: Fuller Ave. (night)

Source height = 1.01 m

ROAD (0.00 + 35.55 + 0.00) = 35.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
0	90	0.58	56.99	0.00	-17.10	-4.34	0.00	0.00	0.00	35.55
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Segment Leq : 35.55 dBA

Total Leq All Segments: 55.57 dBA (49.70 dBA with volume correction)

TOTAL Leq FROM ALL SOURCES (DAY): 62.13 (56.26 with volume correction)
(NIGHT): 55.57 (49.70 with volume correction)