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August 20, 2025

Hummel Properties Inc.
P.O. Box 612
St. David's, Ontario
L0S 1P0

Attention: Jennifer Vida **VIA E-MAIL**
jennifer@hummelproperties.net

Re: Addendum Letter #2 to the Environmental Noise Feasibility Study
2203 Niagara Stone Road
Niagara-on-the-Lake, Ontario
VCL File: 118-0418

Dear Ms. Vida:

1.0 INTRODUCTION

Valcoustics Canada Ltd. (VCL) previously prepared an Environmental Noise Feasibility Study, dated November 21, 2018 (herein referred to as the "Noise Report") for the proposed development at 2203 Niagara Stone Road in the Town of Niagara-on-the-Lake (NOTL). VCL subsequently prepared Addendum #1, dated November 11, 2021, to address comments from Niagara Region. This Addendum #2 has been prepared to address revisions to the Site Plan.

From an acoustical perspective, the most significant change to the Site Plan is that the heights of the two townhouse blocks have increased from 1.5-storeys to 2 storeys. There are also some minor changes to the building footprints to accommodate the increase in the number of townhouse units within these two blocks from 6 units to 9 units. However, the building setback distances from the transportation noise source (Niagara Stone Road) has remained unchanged since the Noise Report and Addendum #1.

The updated analysis and the noise abatement measures required to meet the Ministry of the Environment, Conservation and Parks (MECP) noise guidelines are outlined herein.

The analysis in this Addendum is based on the Site Plan prepared by Upper Canada Planning & Engineering Ltd., dated July 23, 2025. The Site Plan is shown as Figure 1.

2.0 NOISE SOURCES

2.1 TRANSPORTATION NOISE SOURCES

The noise source with potential to impact the proposed development is road traffic on Niagara Stone Road. Traffic volumes on the other surrounding roadways are anticipated to be minor and no significant noise impact at the subject site is expected. Thus, these roadways have not been considered further in this assessment.

The analysis in Addendum #1 used year 2019 traffic data, projected 20 years from the date of the letter (as required by Niagara Region), for Niagara Stone Road. The analysis in this Addendum #2 uses the same traffic data, with the volumes projected to the year 2045 (20 years from the current date), at a growth rate of 2%, compounded annually.

The posted speed limit on Niagara Stone Road is 70 km/h to the west of the site and 50 km/h to the east of the site. Similar to the Noise Report and Addendum #1, a speed of 70 km/h was applied to the full stretch of Niagara Stone Road in the vicinity of the site to be conservative.

The road traffic data is shown in Appendix A and summarized in Table 1.

2.2 STATIONARY NOISE SOURCES

The building setback distances from the proposed development to the stationary noise sources in the vicinity (The Old Winery Restaurant & Wine Bar, NOTL Fire and Emergency Services, NOTL Community Centre and Public Library and the Jackson Triggs Estate Winery) remain unchanged from the Noise Report and Addendum #1, and it is expected that there have been no significant changes to the operations of these facilities. Thus, the conclusions of the stationary noise assessment from the Noise Report and previous Addendum #1 remain unchanged. Mitigation measures are not required for the stationary noise sources.

3.0 NOISE IMPACT ASSESSMENT

3.1 ASSESSMENT

Using the road traffic data in Table 1, the sound levels, in terms of $L_{eq\ Day}$ and $L_{eq\ Night}$, were determined using STAMSON V5.04 – ORNAMENT, the computerized road traffic noise prediction model of the MECP.

The daytime and nighttime sound levels at the building facades were assessed at a second-floor height of 4.5 m above grade (the worst-case locations).

The unmitigated daytime outdoor living area (OLA) sound levels at the rear yard of Units 1 (the southernmost unit) and 9 (the northernmost unit) were assessed at a standing height of 1.5 m above grade, 3 m from midpoint of the rear dwelling facade.

It is noted that Unit 9 has a smaller rear yard and a larger side yard than the other units. The side yard appears to be more similar to the front yard than the rear yard in terms of function; that is, the front and side yards are both adjacent to a transformer and a community mailbox and would

therefore not be intended for the quiet enjoyment of the outdoor environment. As a result, this side yard would not strictly qualify as an OLA under the MECP guidelines. However, for reference, the daytime sound level was also calculated at the side yard, at a height of 1.5 m, 3 m from the midpoint of the side façade.

Inherent screening of each building face due to its orientation to the noise sources was taken into account.

3.2 RESULTS

The highest daytime/nighttime sound levels of 60 dBA/49 dBA are predicted to occur at the north facade of all the dwelling units, the facades with the greatest exposure to Niagara Stone Road. This represents a 1 dB increase in sound levels relative to Addendum #1.

The highest unmitigated daytime OLA sound level of 50 dBA is predicted at the rear yard of Unit 9.

Table 2 summarizes the predicted sound levels outdoors at specific locations. A sample sound level calculation is included as Appendix B.

3.3 NOISE ABATEMENT MEASURES

3.3.1 Indoors

The wall and window STC requirements were calculated using the same method as the Noise Report and Addendum #1. That is, in determining the worst-case architectural requirements for the residential units, wall and window areas were assumed to be 80% and 30% of the associated floor area, respectively, on each facade of a corner room with both facades exposed directly or at an angle to the road traffic noise sources, for both living/dining areas and sleeping quarters.

The analysis shows that the exterior wall and window requirements and the ventilation requirements remain unchanged from Addendum #1:

- all dwelling units require the provision for adding air conditioning; and
- exterior wall and window construction meeting the minimum non-acoustical requirements of the Ontario Building Code (OBC) will be sufficient to meet the indoor noise criteria for all dwelling units.

3.3.2 Outdoors

The sound barrier requirements remain unchanged from the Noise Report and Addendum #1. That is, the unmitigated daytime OLA sound levels at the rear yards of all the dwelling units are predicted to be below the 55 dBA design objective. Thus, sound barriers are not required at these locations.

It is also noted that the unmitigated daytime sound level at the side yard of Unit 9 is predicted to be 58 dBA, which is within the 60 dBA maximum permitted for OLAs under the MECP guidelines.

3.3.3 Warning Clauses

Warning clauses are a tool to inform prospective owners/occupants of potential annoyance due to existing noise sources. Where the guideline sound level limits are exceeded, appropriate warning clauses should be registered on title or included in the development agreement that is registered on title. The warning clauses should also be included in agreements of Offers of Purchase and Sale and lease/rental agreements to make future occupants aware of the potential noise situation.

Table 3 and the notes to Table 3 summarize the warning clauses for the site.

4.0 CONCLUSIONS

The analysis shows that that the noise control requirements remain unchanged from Addendum #1. That is, all dwellings require the provision for adding air conditioning.

If further information is required, please contact the undersigned.

Yours truly,

VALCOUSTICS CANADA LTD.

Per: _____
Morgan Austin, B.A.Sc.

Per: _____
Seema Nagaraj, Ph.D., P.Eng.

LICENSED PROFESSIONAL ENGINEER
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S. NAGARAJ
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PROVINCE OF ONTARIO

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2203 Niagara Stone Road, Niagara-on-the-Lake - Addendum #2 v1_0.docx

TABLE 1 ROAD TRAFFIC DATA

Roadway	Year	24-Hour Volume(1)	% Trucks		Day/Night Split (%)	Speed Limit (kph)
			Medium	Heavy		
Niagara Stone Road(1)	2019 (2045)	8 518 (14 254)	1.4	0.4	96/4	70(2)

Notes:

(1) The 24-volume, truck percentages and day/night split were calculated from the ATR counts obtained from Niagara Region. The year 2045 volumes was obtained by projecting the year 2019 volume at a growth rate of 2%, compounded annually.

(2) The posted speed limit on Niagara Stone Road is 70 km/h to the west of the site and 50 km/h to the east of the site. To be conservative, a speed of 70 km/h was applied to the full stretch of Niagara Stone Road.

TABLE 2 PREDICTED UNMITIGATED SOUND LEVELS OUTDOORS

Location(1)	Source	Distance (m)(2)	$L_{eq\ Day}$ (dBA)	$L_{eq\ Night}$ (dBA)
Unit 1 (North Facade)	Niagara Stone Road	34	60	49
Unit 9 (North Facade)	Niagara Stone Road	34	60	49
Unit 1 (OLA)	Niagara Stone Road	61	43	-
Unit 9 (OLA)	Niagara Stone Road	48	50	-
Unit 9 (Side Yard)	Niagara Stone Road	37	58	-

Notes:

(1) See Figure 1.

(2) Distance indicated is taken from the centreline of the noise source to the point of reception.

TABLE 3 MINIMUM NOISE ABATEMENT MEASURES

Location	Air Conditioning (1)	Exterior Wall (2)	Window STC Rating (3)	Sound Barriers (4)	Warning Clauses (5)
All Dwelling Units	Provision for Adding	No Special Acoustical Requirements			A + B + C

Notes:

(1) Where means must be provided to allow windows to remain closed for noise control purposes, a commonly used technique is that of central air conditioning. Where possible, air cooled condenser units, if any, should be located in a noise insensitive area.

Provision for air conditioning would correspond to a ducted, forced air heating system, which would allow the addition of central air conditioning at a later date by the occupant.

(2) STC - Sound Transmission Class Rating (Reference ASTM-E413).

(3) STC - Sound Transmission Class Rating (Reference ASTM-E413). A sliding glass walkout door should be considered as a window and be included in the percentage of glazing.

(4) Sound barriers must be of solid construction having a minimum face density of 20 kg/m^2 with no gaps or cracks. Earthen berms, solid fences or combinations of berms/fences are acceptable.

(5) Warning clauses to be registered on title and be included in Offers of Purchase and Sale for designated lots:

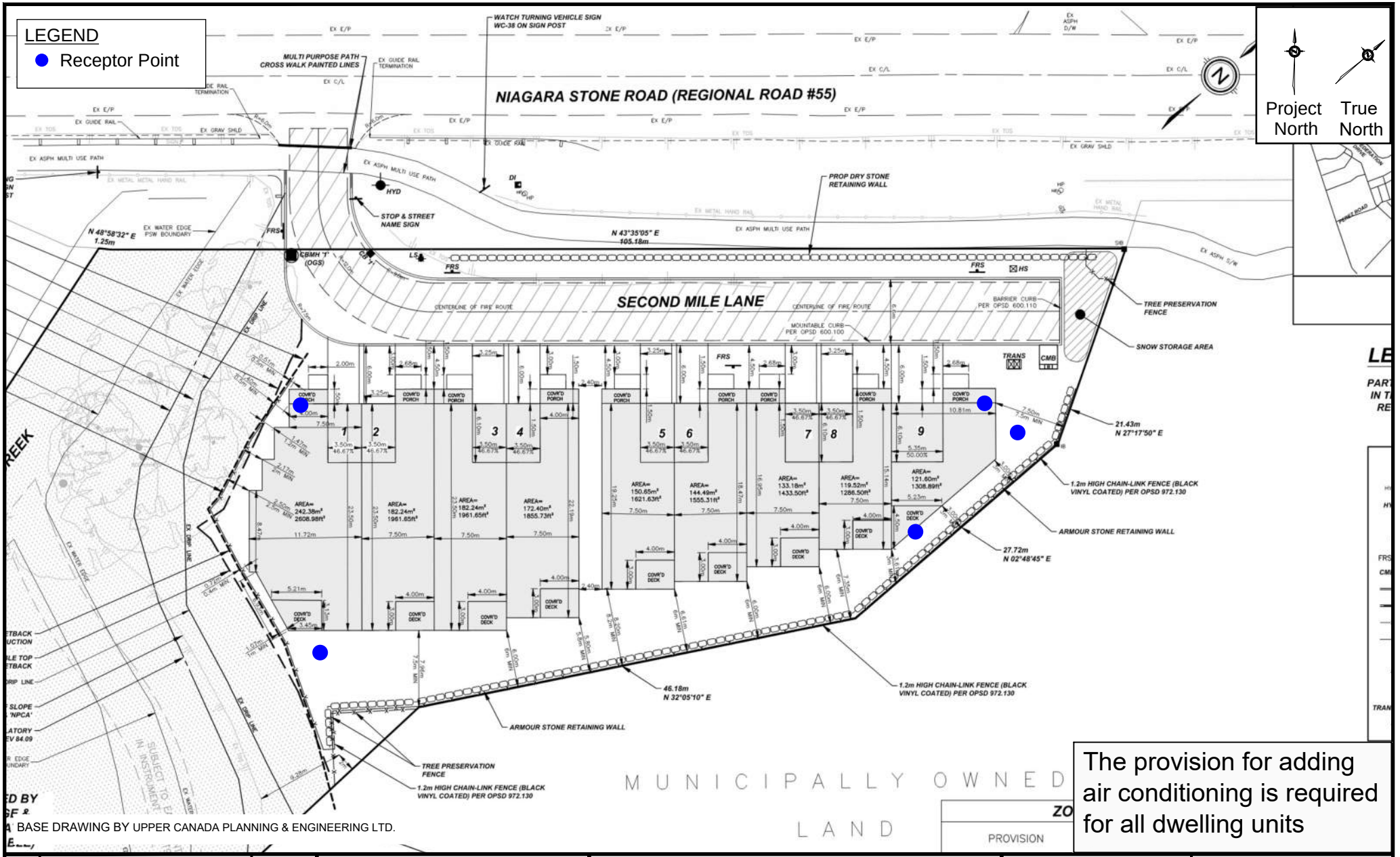
A. "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound level may exceed the noise criteria of the municipality and/or the Ministry of the Environment, Conservation and Parks."

B. "This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the noise criteria of the municipality and/or the Ministry of the Environment, Conservation and Parks."

C. "Purchasers/occupants are advised that due to the proximity of the existing community centre/library building, restaurant and winery, sound from these facilities may, at times, be audible."

(6) Conventional ventilated attic roof construction meeting OBC requirements is satisfactory.

(7) All exterior doors shall be fully weather-stripped.



BASE DRAWING BY UPPER CANADA PLANNING & ENGINEERING LTD.

No.	Revision/Issue	Date

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Title	Project No.	Date
Site Plan	118-0418	August 15, 2025
Project Name	**Scale**	**Figure**
2203 Niagara Stone Road, Niagara-on-the-Lake	N.T.S.	1

APPENDIX A

ROAD TRAFFIC DATA

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Niagara Region
Street: 617303 - NB
Location: 7459

A study of vehicle traffic was conducted with the device having serial number 133788. The study was done in the NB lane at 617303 - NB in Niagara Region, ON in county. The study began on 2019-03-28 at 12:00 AM and concluded on 2019-03-29 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 4,004 vehicles passed through the location with a peak volume of 101 on 2019-03-28 at [03:45 PM-04:00 PM] and a minimum volume of 0 on 2019-03-28 at [12:30 AM-12:45 AM]. The AADT count for this study was 4,004.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 39 KM/H range or lower. The average speed for all classifed vehicles was 35 KM/H with 10.35% vehicles exceeding the posted speed of 50 KM/H. 0.00% percent of the total vehicles were traveling in excess of 89 KM/H. The mode speed for this traffic study was 39KM/H and the 85th percentile was 48.75 KM/H.

< to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	95 to 99	100 to 104	105 to >
1609	1210	741	310	60	21	7	13	0	0	0	0	0	0	0

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 3899 which represents 98 percent of the total classified vehicles. The number of Small Trucks in the study was 45 which represents 1 percent of the total classified vehicles. The number of Trucks/Buses in the study was 19 which represents 0 percent of the total classified vehicles. The number of Tractor Trailers in the study was 8 which represents 0 percent of the total classified vehicles.

< to 4.9	5.0 to 7.9	8.0 to 9.9	10.0 to 12.9	13.0 to 15.9	16.0 to 18.9	19.0 to 21.9	22.0 to >							
3032	867	45	19	5	1	2	0							

CHART 2

HEADWAY

During the peak traffic period, on 2019-03-28 at [03:45 PM-04:00 PM] the average headway between vehicles was 8.824 seconds. During the slowest traffic period, on 2019-03-28 at [12:30 AM-12:45 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 7.00 and 28.00 degrees C.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Niagara Region
Street: 617303 - SB
Location: 7459

A study of vehicle traffic was conducted with the device having serial number 113292. The study was done in the SB lane at 617303 - SB in Niagara Region, ON in county. The study began on 2019-03-28 at 12:00 AM and concluded on 2019-03-29 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 4,514 vehicles passed through the location with a peak volume of 121 on 2019-03-28 at [03:15 PM-03:30 PM] and a minimum volume of 0 on 2019-03-28 at [02:15 AM-02:30 AM]. The AADT count for this study was 4,514.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 45 - 50 KM/H range or lower. The average speed for all classifed vehicles was 43 KM/H with 25.15% vehicles exceeding the posted speed of 50 KM/H. 0.00% percent of the total vehicles were traveling in excess of 89 KM/H. The mode speed for this traffic study was 45KM/H and the 85th percentile was 52.61 KM/H.

< to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	95 to 99	100 to 104	105 to >
844	1170	1331	867	187	45	18	7	0	0	0	0	0	0	0

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 4384 which represents 98 percent of the total classified vehicles. The number of Small Trucks in the study was 52 which represents 1 percent of the total classified vehicles. The number of Trucks/Buses in the study was 22 which represents 0 percent of the total classified vehicles. The number of Tractor Trailers in the study was 11 which represents 0 percent of the total classified vehicles.

< to 4.9	5.0 to 7.9	8.0 to 9.9	10.0 to 12.9	13.0 to 15.9	16.0 to 18.9	19.0 to 21.9	22.0 to >							
3282	1102	52	22	6	3	0	2							

CHART 2

HEADWAY

During the peak traffic period, on 2019-03-28 at [03:15 PM-03:30 PM] the average headway between vehicles was 7.377 seconds. During the slowest traffic period, on 2019-03-28 at [02:15 AM-02:30 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 6.00 and 24.00 degrees C.

Time/Class Report

Device ID: 133788	**Location:** 7459			**Raw Count:** 4,004	
Operator: MD	**Lane:** NB			**AADT Count:** 4,004	
Begin: 03-28-2019 12:00 AM	**Street:** 617303 - NB			**AADT Factor:** 1	
End: 03-29-2019 12:00 AM	**City:** Niagara Region			**Speed Limit:** 50	
Hours: 24.00	**County:**				
Period (min): 15	**State:** ON				

Date And Time Range	< to 15	16 to 25	26 to 32	33 to 42	43 to 51	52 to 61	62 to 71	72 to >	Total
Thu,03-28-2019									
[00:00-00:15]	4	2	0	0	0	0	0	0	6
[00:15-00:30]	2	0	0	0	0	0	0	0	2
[00:30-00:45]	0	0	0	0	0	0	0	0	0
[00:45-01:00]	1	0	0	0	0	0	0	0	1
	7	2	0	0	0	0	0	0	9
[01:00-01:15]	0	0	0	0	0	0	0	0	0
[01:15-01:30]	1	0	0	0	0	0	0	0	1
[01:30-01:45]	0	1	0	0	0	0	0	0	1
[01:45-02:00]	1	1	0	0	0	0	0	0	2
	2	2	0	0	0	0	0	0	4
[02:00-02:15]	0	0	0	0	0	0	0	0	0
[02:15-02:30]	1	0	0	0	0	0	0	0	1
[02:30-02:45]	1	0	0	0	0	0	0	0	1
[02:45-03:00]	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	2
[03:00-03:15]	0	1	0	0	0	0	0	0	1
[03:15-03:30]	2	2	0	0	0	0	0	0	4
[03:30-03:45]	1	1	0	0	0	0	0	0	2
[03:45-04:00]	1	0	0	0	0	0	0	0	1
	4	4	0	0	0	0	0	0	8
[04:00-04:15]	2	0	0	0	0	0	0	0	2
[04:15-04:30]	0	0	0	0	0	0	0	0	0
[04:30-04:45]	4	0	0	0	0	0	0	0	4
[04:45-05:00]	1	1	0	0	0	0	0	0	2
	7	1	0	0	0	0	0	0	8
[05:00-05:15]	3	1	0	0	0	0	0	0	4
[05:15-05:30]	0	0	0	0	0	0	0	0	0
[05:30-05:45]	10	2	0	0	0	0	0	0	12
[05:45-06:00]	7	2	1	0	0	0	0	0	10
	20	5	1	0	0	0	0	0	26
[06:00-06:15]	7	2	0	1	0	0	0	0	10
[06:15-06:30]	18	0	1	0	0	0	0	0	19
[06:30-06:45]	18	2	0	0	0	0	0	0	20
[06:45-07:00]	13	7	1	0	0	0	0	0	21
	56	11	2	1	0	0	0	0	70
[07:00-07:15]	14	7	0	2	0	0	0	0	23
[07:15-07:30]	18	7	1	0	1	0	0	0	27
[07:30-07:45]	27	11	3	1	0	0	0	0	42

Time/Class Report

Device ID: 133788	**Location:** 7459			**Raw Count:** 4,004	
Operator: MD	**Lane:** NB			**AADT Count:** 4,004	
Begin: 03-28-2019 12:00 AM	**Street:** 617303 - NB			**AADT Factor:** 1	
End: 03-29-2019 12:00 AM	**City:** Niagara Region			**Speed Limit:** 50	
Hours: 24.00	**County:**				
Period (min): 15	**State:** ON				

Date And Time Range	< to 15	16 to 25	26 to 32	33 to 42	43 to 51	52 to 61	62 to 71	72 to >	Total
Thu,03-28-2019									
[07:45-08:00]	38	8	0	1	0	1	0	0	48
	97	33	4	4	1	1	0	0	140
[08:00-08:15]	43	14	1	2	0	0	0	0	60
[08:15-08:30]	39	17	2	0	0	0	0	0	58
[08:30-08:45]	36	19	1	0	0	0	0	0	56
[08:45-09:00]	38	16	2	0	0	0	0	0	56
	156	66	6	2	0	0	0	0	230
[09:00-09:15]	41	19	3	1	0	0	0	0	64
[09:15-09:30]	50	10	0	1	0	0	0	0	61
[09:30-09:45]	40	12	0	0	1	0	0	0	53
[09:45-10:00]	45	22	1	0	1	0	0	0	69
	176	63	4	2	2	0	0	0	247
[10:00-10:15]	49	14	1	0	0	0	0	0	64
[10:15-10:30]	61	19	2	0	0	0	0	0	82
[10:30-10:45]	44	20	1	0	0	0	0	0	65
[10:45-11:00]	56	20	3	1	0	0	0	0	80
	210	73	7	1	0	0	0	0	291
[11:00-11:15]	56	19	0	0	0	0	0	0	75
[11:15-11:30]	63	9	1	0	0	0	0	0	73
[11:30-11:45]	60	21	2	0	0	0	0	0	83
[11:45-12:00]	67	20	0	0	0	0	0	0	87
	246	69	3	0	0	0	0	0	318
[12:00-12:15]	65	17	0	0	0	0	0	0	82
[12:15-12:30]	71	23	0	0	0	0	0	0	94
[12:30-12:45]	58	18	0	2	0	0	0	0	78
[12:45-13:00]	79	21	0	0	0	0	0	0	100
	273	79	0	2	0	0	0	0	354
[13:00-13:15]	61	24	0	0	1	0	0	0	86
[13:15-13:30]	64	16	2	0	0	0	0	0	82
[13:30-13:45]	65	25	2	0	0	0	0	0	92
[13:45-14:00]	67	17	1	0	0	0	0	0	85
	257	82	5	0	1	0	0	0	345
[14:00-14:15]	61	17	1	1	0	0	0	0	80
[14:15-14:30]	65	18	2	0	0	0	0	0	85
[14:30-14:45]	44	21	1	0	0	0	0	0	66
[14:45-15:00]	78	17	1	2	0	0	0	0	98
	248	73	5	3	0	0	0	0	329

Time/Class Report

Device ID: 133788	**Location:** 7459		**Raw Count:** 4,004
Operator: MD	**Lane:** NB		**AADT Count:** 4,004
Begin: 03-28-2019 12:00 AM	**Street:** 617303 - NB		**AADT Factor:** 1
End: 03-29-2019 12:00 AM	**City:** Niagara Region		**Speed Limit:** 50
Hours: 24.00	**County:**		
Period (min): 15	**State:** ON		

Date And Time Range	< to 15	16 to 25	26 to 32	33 to 42	43 to 51	52 to 61	62 to 71	72 to >	Total
Thu,03-28-2019									
[15:00-15:15]	68	16	0	1	0	0	0	0	85
[15:15-15:30]	74	15	1	0	0	0	0	0	90
[15:30-15:45]	69	16	1	1	0	0	0	0	87
[15:45-16:00]	76	22	2	0	0	0	1	0	101
	287	69	4	2	0	0	1	0	363
[16:00-16:15]	64	16	0	0	0	0	0	0	80
[16:15-16:30]	63	17	2	1	0	0	0	0	83
[16:30-16:45]	62	14	1	0	0	0	0	0	77
[16:45-17:00]	53	14	0	0	0	0	0	0	67
	242	61	3	1	0	0	0	0	307
[17:00-17:15]	59	14	0	0	0	0	0	0	73
[17:15-17:30]	58	10	0	0	0	0	1	0	69
[17:30-17:45]	36	14	0	0	0	0	0	0	50
[17:45-18:00]	44	8	0	0	0	0	0	0	52
	197	46	0	0	0	0	1	0	244
[18:00-18:15]	43	9	0	0	1	0	0	0	53
[18:15-18:30]	43	11	0	1	0	0	0	0	55
[18:30-18:45]	42	8	0	0	0	0	0	0	50
[18:45-19:00]	48	7	0	0	0	0	0	0	55
	176	35	0	1	1	0	0	0	213
[19:00-19:15]	43	10	0	0	0	0	0	0	53
[19:15-19:30]	43	11	0	0	0	0	0	0	54
[19:30-19:45]	33	6	0	0	0	0	0	0	39
[19:45-20:00]	30	9	0	0	0	0	0	0	39
	149	36	0	0	0	0	0	0	185
[20:00-20:15]	25	8	0	0	0	0	0	0	33
[20:15-20:30]	20	4	0	0	0	0	0	0	24
[20:30-20:45]	17	9	0	0	0	0	0	0	26
[20:45-21:00]	17	3	0	0	0	0	0	0	20
	79	24	0	0	0	0	0	0	103
[21:00-21:15]	22	6	0	0	0	0	0	0	28
[21:15-21:30]	25	6	0	0	0	0	0	0	31
[21:30-21:45]	13	4	0	0	0	0	0	0	17
[21:45-22:00]	17	2	1	0	0	0	0	0	20
	77	18	1	0	0	0	0	0	96
[22:00-22:15]	16	5	0	0	0	0	0	0	21
[22:15-22:30]	11	0	0	0	0	0	0	0	11
[22:30-22:45]	7	4	0	0	0	0	0	0	11

Time/Class Report

Device ID: 133788	**Location:** 7459			**Raw Count:** 4,004	
Operator: MD	**Lane:** NB			**AADT Count:** 4,004	
Begin: 03-28-2019 12:00 AM	**Street:** 617303 - NB			**AADT Factor:** 1	
End: 03-29-2019 12:00 AM	**City:** Niagara Region			**Speed Limit:** 50	
Hours: 24.00	**County:**				
Period (min): 15	**State:** ON				

Date And Time Range	< to 15	16 to 25	26 to 32	33 to 42	43 to 51	52 to 61	62 to 71	72 to >	Total
Thu,03-28-2019									
[22:45-23:00]	11	2	0	0	0	0	0	0	13
	45	11	0	0	0	0	0	0	56
[23:00-23:15]	5	2	0	0	0	0	0	0	7
[23:15-23:30]	2	1	0	0	0	0	0	0	3
[23:30-23:45]	6	1	0	0	0	0	0	0	7
[23:45-00:00]	6	0	0	0	0	0	0	0	6
	19	4	0	0	0	0	0	0	23
03-28-2019 12:00 AM									
03-29-2019 12:00 AM	3032	867	45	19	5	1	2	0	3971

Time/Class Report

Device ID: 113292	**Location:** 7459			**Raw Count:** 4,514	
Operator: MD	**Lane:** SB			**AADT Count:** 4,514	
Begin: 03-28-2019 12:00 AM	**Street:** 617303 - SB			**AADT Factor:** 1	
End: 03-29-2019 12:00 AM	**City:** Niagara Region			**Speed Limit:** 50	
Hours: 24.00	**County:**				
Period (min): 15	**State:** ON				

Date And Time Range	< to 15	16 to 25	26 to 32	33 to 42	43 to 51	52 to 61	62 to 71	72 to >	Total
Thu,03-28-2019									
[00:00-00:15]	4	0	0	0	0	0	0	0	4
[00:15-00:30]	4	2	0	0	0	0	0	0	6
[00:30-00:45]	5	1	0	0	0	0	0	0	6
[00:45-01:00]	4	2	0	0	0	0	0	0	6
	17	5	0	0	0	0	0	0	22
[01:00-01:15]	6	1	0	0	0	0	0	0	7
[01:15-01:30]	3	0	0	0	0	0	0	0	3
[01:30-01:45]	4	0	0	0	1	0	0	0	5
[01:45-02:00]	2	0	0	0	0	0	0	0	2
	15	1	0	0	1	0	0	0	17
[02:00-02:15]	2	1	0	0	0	0	0	0	3
[02:15-02:30]	0	0	0	0	0	0	0	0	0
[02:30-02:45]	1	1	0	0	0	0	0	0	2
[02:45-03:00]	1	0	0	0	0	0	0	0	1
	4	2	0	0	0	0	0	0	6
[03:00-03:15]	1	0	0	0	0	0	0	0	1
[03:15-03:30]	0	0	0	0	0	0	0	0	0
[03:30-03:45]	1	0	0	0	0	0	0	0	1
[03:45-04:00]	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	2
[04:00-04:15]	0	0	0	0	0	0	0	0	0
[04:15-04:30]	0	0	0	0	0	0	0	0	0
[04:30-04:45]	0	0	0	0	0	0	0	0	0
[04:45-05:00]	1	1	0	0	0	0	0	0	2
	1	1	0	0	0	0	0	0	2
[05:00-05:15]	0	0	0	0	0	0	0	0	0
[05:15-05:30]	2	3	0	0	0	0	0	0	5
[05:30-05:45]	2	1	0	0	0	0	0	0	3
[05:45-06:00]	3	4	0	0	0	0	0	0	7
	7	8	0	0	0	0	0	0	15
[06:00-06:15]	3	1	0	0	0	0	0	0	4
[06:15-06:30]	4	4	0	1	0	0	0	0	9
[06:30-06:45]	6	4	0	1	0	0	0	0	11
[06:45-07:00]	10	6	0	0	0	0	0	0	16
	23	15	0	2	0	0	0	0	40
[07:00-07:15]	11	6	1	0	0	0	0	0	18
[07:15-07:30]	17	6	1	1	0	0	0	0	25
[07:30-07:45]	14	13	0	0	0	0	0	0	27

Time/Class Report

Device ID: 113292	**Location:** 7459			**Raw Count:** 4,514	
Operator: MD	**Lane:** SB			**AADT Count:** 4,514	
Begin: 03-28-2019 12:00 AM	**Street:** 617303 - SB			**AADT Factor:** 1	
End: 03-29-2019 12:00 AM	**City:** Niagara Region			**Speed Limit:** 50	
Hours: 24.00	**County:**				
Period (min): 15	**State:** ON				

Date And Time Range	< to 15	16 to 25	26 to 32	33 to 42	43 to 51	52 to 61	62 to 71	72 to >	Total
Thu,03-28-2019									
[07:45-08:00]	33	14	1	1	1	0	0	0	50
	75	39	3	2	1	0	0	0	120
[08:00-08:15]	31	11	2	1	0	1	0	0	46
[08:15-08:30]	37	13	2	0	0	0	0	0	52
[08:30-08:45]	44	16	0	1	1	0	0	0	62
[08:45-09:00]	30	21	1	0	0	0	0	0	52
	142	61	5	2	1	1	0	0	212
[09:00-09:15]	42	21	1	0	0	0	0	1	65
[09:15-09:30]	40	16	1	0	0	0	0	0	57
[09:30-09:45]	46	17	1	1	0	0	0	0	65
[09:45-10:00]	54	26	1	1	0	0	0	0	82
	182	80	4	2	0	0	0	1	269
[10:00-10:15]	68	18	0	1	1	1	0	0	89
[10:15-10:30]	63	19	2	0	0	0	0	0	84
[10:30-10:45]	40	20	2	1	0	0	0	0	63
[10:45-11:00]	51	19	3	0	0	0	0	0	73
	222	76	7	2	1	1	0	0	309
[11:00-11:15]	46	25	1	0	0	0	0	0	72
[11:15-11:30]	52	16	2	0	0	0	0	0	70
[11:30-11:45]	57	20	1	0	0	0	0	0	78
[11:45-12:00]	68	28	1	0	0	0	0	0	97
	223	89	5	0	0	0	0	0	317
[12:00-12:15]	70	15	1	0	0	0	0	1	87
[12:15-12:30]	62	21	0	1	0	0	0	0	84
[12:30-12:45]	65	23	0	0	0	0	0	0	88
[12:45-13:00]	84	27	1	2	0	0	0	0	114
	281	86	2	3	0	0	0	1	373
[13:00-13:15]	66	15	1	0	0	0	0	0	82
[13:15-13:30]	69	23	2	0	0	0	0	0	94
[13:30-13:45]	78	27	1	2	0	0	0	0	108
[13:45-14:00]	61	31	1	0	0	0	0	0	93
	274	96	5	2	0	0	0	0	377
[14:00-14:15]	70	29	0	0	0	0	0	0	99
[14:15-14:30]	69	22	2	0	0	0	0	0	93
[14:30-14:45]	68	31	2	1	0	0	0	0	102
[14:45-15:00]	67	26	0	1	0	0	0	0	94
	274	108	4	2	0	0	0	0	388

Time/Class Report

Device ID: 113292	**Location:** 7459			**Raw Count:** 4,514	
Operator: MD	**Lane:** SB			**AADT Count:** 4,514	
Begin: 03-28-2019 12:00 AM	**Street:** 617303 - SB			**AADT Factor:** 1	
End: 03-29-2019 12:00 AM	**City:** Niagara Region			**Speed Limit:** 50	
Hours: 24.00	**County:**				
Period (min): 15	**State:** ON				

Date And Time Range	< to 15	16 to 25	26 to 32	33 to 42	43 to 51	52 to 61	62 to 71	72 to >	Total
Thu,03-28-2019									
[15:00-15:15]	74	21	1	0	0	0	0	0	96
[15:15-15:30]	86	31	2	2	0	0	0	0	121
[15:30-15:45]	82	22	1	1	0	0	0	0	106
[15:45-16:00]	68	19	1	0	0	0	0	0	88
	310	93	5	3	0	0	0	0	411
[16:00-16:15]	79	23	2	0	1	1	0	0	106
[16:15-16:30]	88	28	0	1	0	0	0	0	117
[16:30-16:45]	71	20	1	0	0	0	0	0	92
[16:45-17:00]	66	29	3	1	0	0	0	0	99
	304	100	6	2	1	1	0	0	414
[17:00-17:15]	72	18	0	0	0	0	0	0	90
[17:15-17:30]	77	24	0	0	0	0	0	0	101
[17:30-17:45]	55	21	0	0	0	0	0	0	76
[17:45-18:00]	52	10	1	0	0	0	0	0	63
	256	73	1	0	0	0	0	0	330
[18:00-18:15]	35	13	0	0	0	0	0	0	48
[18:15-18:30]	47	8	0	0	0	0	0	0	55
[18:30-18:45]	45	10	1	0	0	0	0	0	56
[18:45-19:00]	47	9	0	0	0	0	0	0	56
	174	40	1	0	0	0	0	0	215
[19:00-19:15]	35	16	1	0	0	0	0	0	52
[19:15-19:30]	38	8	0	0	0	0	0	0	46
[19:30-19:45]	30	4	1	0	0	0	0	0	35
[19:45-20:00]	30	9	0	0	0	0	0	0	39
	133	37	2	0	0	0	0	0	172
[20:00-20:15]	35	7	0	0	0	0	0	0	42
[20:15-20:30]	29	7	0	0	0	0	0	0	36
[20:30-20:45]	32	20	0	0	0	0	0	0	52
[20:45-21:00]	30	8	0	0	0	0	0	0	38
	126	42	0	0	0	0	0	0	168
[21:00-21:15]	28	4	0	0	0	0	0	0	32
[21:15-21:30]	27	7	1	0	0	0	0	0	35
[21:30-21:45]	32	6	0	0	0	0	0	0	38
[21:45-22:00]	29	6	0	0	0	0	0	0	35
	116	23	1	0	0	0	0	0	140
[22:00-22:15]	25	8	0	0	0	0	0	0	33
[22:15-22:30]	21	3	1	0	0	0	0	0	25
[22:30-22:45]	10	4	0	0	0	0	0	0	14

Time/Class Report

Device ID: 113292	**Location:** 7459			**Raw Count:** 4,514	
Operator: MD	**Lane:** SB			**AADT Count:** 4,514	
Begin: 03-28-2019 12:00 AM	**Street:** 617303 - SB			**AADT Factor:** 1	
End: 03-29-2019 12:00 AM	**City:** Niagara Region			**Speed Limit:** 50	
Hours: 24.00	**County:**				
Period (min): 15	**State:** ON				

Date And Time Range	< to 15	16 to 25	26 to 32	33 to 42	43 to 51	52 to 61	62 to 71	72 to >	Total
Thu,03-28-2019									
[22:45-23:00]	12	4	0	0	0	0	0	0	16
	68	19	1	0	0	0	0	0	88
[23:00-23:15]	20	5	0	0	1	0	0	0	26
[23:15-23:30]	11	3	0	0	0	0	0	0	14
[23:30-23:45]	16	0	0	0	0	0	0	0	16
[23:45-00:00]	6	0	0	0	0	0	0	0	6
	53	8	0	0	1	0	0	0	62
03-28-2019 12:00 AM									
03-29-2019 12:00 AM	3282	1102	52	22	6	3	0	2	4469

APPENDIX B

SAMPLE SOUND LEVEL CALCULATION

```
STAMSON 5.0         NORMAL REPORT         Date: 15-08-2025 13:55:30
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 1_nf.te                Time Period: Day/Night 16/8 hours
Description: Unit 1 - North Facade


Road data, segment # 1: NiagaraStone (day/night)
-----------------------------------------------
Car traffic volume  : 13438/560   veh/TimePeriod  *
Medium truck volume :   192/8     veh/TimePeriod  *
Heavy truck volume  :    55/2     veh/TimePeriod  *
Posted speed limit  :    70 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   8518
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  26.00
    Medium Truck % of Total Volume     :   1.40
    Heavy Truck  % of Total Volume     :   0.40
    Day (16 hrs) % of Total Volume     :  96.00

Data for Segment # 1: NiagaraStone (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  :  34.00 / 34.00  m
Receiver height           :   4.50 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00


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

Source height = 0.80 m

ROAD (0.00 + 59.74 + 0.00) = 59.74 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.59  66.74   0.00  -5.65  -1.34   0.00   0.00   0.00  59.74
-------------------------------------------------------------------------------

Segment Leq : 59.74 dBA

Total Leq All Segments: 59.74 dBA
```

Results segment # 1: NiagaraStone (night)

Source height = 0.77 m

ROAD (0.00 + 48.88 + 0.00) = 48.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.59	55.88	0.00	-5.66	-1.34	0.00	0.00	0.00	48.88

Segment Leq : 48.88 dBA

Total Leq All Segments: 48.88 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.74
(NIGHT): 48.88