

NOISE IMPACT STUDY – Project: 22169.00

Proposed Industrial Development **12505 Heart Lake Road** Caledon, Ontario

Prepared for:

Berkshire Axis Development
75 Scarsdale Road #201
North York, ON, M3B 2R2

Prepared by:



Dorsa Fardaei, B.A.Sc.



Derek Flake, M.Sc., P.Eng



July 20, 2022

Revision History

Version	Description	Author	Reviewed	Date
- -	Initial Report	DSF	DF	July 20, 2022

Important Notice and Disclaimer

This report was prepared by Aercoustics Engineering Limited (Aercoustics) solely for the client identified above and is to be used exclusively for the purposes set out in the report. The material in this report reflects the judgment of Aercoustics based on information available to them at the time of preparation. Unless manifestly incorrect, Aercoustics assumes information provided by others is accurate. Changed conditions or information occurring or becoming known after the date of this report could affect the results and conclusions presented. Unless otherwise required by law or regulation, this report shall not be shared with any Third Party without the express written consent of Aercoustics. Aercoustics accepts no responsibility for damages, if any, suffered by any Third Party which makes use of the results and conclusions presented in this report.

Executive Summary

Aeroustics Engineering Limited has been retained by Berkshire Axis Development to prepare a Noise Impact Study to support an application for Zoning By-law Amendment for a proposed Industrial Warehouse facility in Caledon, Ontario.

The proposed development is to be located on Heart Lake Road, between Old School Road and Highway 410, in the Town of Caledon, Ontario and will consist of six industrial warehouses (referred to as “Industrial Building 1” to “Industrial Building 6”). The location of the proposed facility as well as the nearby noise-sensitive receptors are shown in Figure 1.

Facility operations will include regular truck deliveries as well as rooftop mechanical equipment servicing the storage area and associated offices. Figure 2 shows the proposed development and location of the stationary noise sources.

The purpose of this study was to assess the existing and future noise environment in the development area and to evaluate the impact of the proposed development on nearby noise-sensitive receptors. The predicted impact on noise-sensitive receptors has been calculated in accordance with the noise guidelines of the Ministry of the Environment, Conservation, and Parks (MECP) publication NPC-300 “*Stationary and Transportation Sources – Approval and Planning*” (August 2013).

Based on the analysis discussed herein and summarized in Table 5, the predicted sound levels at the noise-sensitive receptors will not exceed the sound level limits specified in NPC-300 with noise mitigation measures as detailed in Section 4. These noise controls include an acoustic barrier and restricted hours of operation for certain activities. Further, the proposed facility operations are understood to comply with The Corporation of the Town of Caledon noise by-law, BY-LAW NO. 86-110.

Table of Contents

1	Introduction	1
2	Guidelines and Criteria	1
3	Stationary Noise Sources	3
4	Summary of Noise Control Recommendations	5
5	Conclusion	7

Appendix A

Site Plan Drawings

Appendix B

Sound Power Data

Appendix C

Sample Calculations

1 Introduction

Aercoustics Engineering Limited (Aercoustics) has been retained by Berkshire Axis Development to prepare a Noise Impact Study (NIS) to support an application for Zoning By-law Amendment (ZBA) for proposed Industrial Warehouses (“Industrial Building 1” to “Industrial Building 6”) in the Town of Caledon, Ontario.

The purpose of this study was to assess the noise impact from the stationary sources in the proposed development on the noise-sensitive receptors in the area. This report considered the Ontario Ministry of the Environment, Conservation, and Parks (MECP) guideline NPC-300 *“Stationary and Transportation Sources – Approval and Planning”* (August 2013), and The Corporation of the Town of Caledon noise by-law, BY-LAW NO. 86-110.

The proposed Industrial Warehouse development is to be located on Heart Lake Road, between Old School Road and Highway 410 in the Town of Caledon, Ontario and will consist of six warehouse buildings and associated parking areas. This study was based on site-specific drawings prepared by Ware Malcomb, which have been included in Appendix A; It should be noted that significant changes to the proposed site layout (e.g. truck routes and numbers) may alter the results presented in this study.

Surrounding land uses include agricultural zoned lands with single detached dwellings immediately adjacent to the site, as well as environmental policy and agricultural lands zoned to allow residential uses to the north and west.

Figure 1 provides a key plan showing the development location and the surrounding area. Figure 2 shows the proposed development and location of the stationary noise sources.

2 Guidelines and Criteria

Sound levels from stationary noise sources were assessed at the noise-sensitive receptors around the site which are predicted to experience the highest sound impact from the proposed facility. A determination of compliance with the relevant sound level limits at these worst-case locations reflects compliance at noise-sensitive receptors located further away, as sound levels typically decrease with distance from the source.

The MECP guidelines require consideration of outdoor points of reception in any useable area within 30 m of the dwelling building, such as the existing dwellings immediately adjacent to the development. These outdoor points of reception have been considered in this study and are represented with a “g” at the end of the Receptor ID. The height and location of the receptors have been selected in accordance with NPC-300. The receptors considered in this study are detailed further in Table 1.

Table 1: Receptor Location Summary

Receptor ID	Description	Location ¹
R01	Existing 2-storey dwelling	20 m west
R01g	Outdoor Receptor for R01	40 m west
R02	Existing 2-storey dwelling	60 m west
R02g	Outdoor Receptor for R02	55 m west
R03	Existing 1-storey dwelling	45 m west
R03g	Outdoor Receptor for R03	30 m west
R04	Existing 2-storey dwelling	210 m southwest
R04g	Outdoor Receptor for R04	210 m southwest
R05	Existing 2-storey dwelling	75 m south
R05g	Outdoor Receptor for R05	75 m south
VL06	Vacant Lot ²	40 m south

¹ – Distances from receptor to closest stationary source; directions from source to receiver.

² – A 2-storey dwelling was assumed for the Vacant Lot, according to NPC-300 guidelines.

The noise level limits pertaining to stationary noise sources have been established based on the Ministry of the Environment, Conservation, and Parks (MECP) publication NPC-300. For sound from a stationary source, the sound level limit at a point of reception, expressed in terms of the one-hour equivalent sound level (L_{eq-1hr}), is the higher of the applicable exclusion limit value given in Table 2, or the background sound level for that point of reception.

Table 2: Noise Exclusion Limits – Stationary Noise Sources – Classes 1, 2, 3, and 4

Time of Day	Sound Level Exclusion Limit* Class 1 Area	Sound Level Exclusion Limit* Class 2 Area	Sound Level Exclusion Limit* Class 3 Area	Sound Level Exclusion Limit* Class 4 Area
	Outdoor Points of Reception			
Day (07:00 to 19:00)	50 dBA	50 dBA	45 dBA	55 dBA
Evening (19:00 to 23:00)	50 dBA	45 dBA	40 dBA	55 dBA

Time of Day	Sound Level Exclusion Limit* Class 1 Area	Sound Level Exclusion Limit* Class 2 Area	Sound Level Exclusion Limit* Class 3 Area	Sound Level Exclusion Limit* Class 4 Area
	Plane of Window of Noise Sensitive Spaces			
Day (07:00 to 19:00)	50 dBA	50 dBA	45 dBA	60 dBA
Evening (19:00 to 23:00)	50 dBA	50 dBA	40 dBA	60 dBA
Night (23:00 to 07:00)	45 dBA	45 dBA	40 dBA	55 dBA

*or the minimum existing hourly background sound level L_{eq} , whichever is higher

The applicable MECF sound level limit is determined by the exclusion limit listed above or the minimum hourly equivalent background sound level, whichever is higher. Road traffic noise may at times exceed the above exclusion limits however for simplicity and conservatism the exclusion limits were used.

The proposed site and lands surrounding the proposed site are considered MECF Class 2 areas. In a Class 2 area, the background sound level during the daytime (07:00 to 19:00) are defined by man-made sources; in this case, noise is generated primarily by road traffic on Heart Lake Road and the nearby Highway 410. Sound levels at evening time (19:00 to 23:00) and nighttime (23:00 to 07:00) are primarily defined by the natural environment and infrequent human activity.

It is noted that the acoustical classification of the area may change in the future based on the approval and construction of the proposed Highway 410 extension. Nonetheless, this study considers the existing acoustic environment designated as Class 2.

The noise-sensitive receptors and associated sound level limits are outlined in Table 3, below.

Table 3: Applicable Sound Level Limits

Receptor ID	Applicable Sound Level Limit (dBA)		
	Daytime ¹	Evening ¹	Nighttime ¹
R01-R05	50	50	45
R01g-R05g	50	45	-
VL06	50	50	45

¹ – Daytime (07:00 – 19:00), Evening (19:00 – 23:00), Nighttime (23:00 – 07:00)

3 Stationary Noise Sources

The stationary noise source prediction model was generated using Datakustik's CadnaA Noise Prediction Software. This model is based on established noise prediction methods outlined in the ISO 9613-2 standard "Acoustics - Attenuation of sound during propagation

outdoors – Part 2: General method of calculation”. Noise levels were predicted using conditions of downwind propagation, generally with hard ground in paved areas or bodies of water.

This assessment was based on the facility operating 24 hours per day. For the sake of conservatism and operational flexibility, a worst-case daytime and evening operating scenario have been modelled using the truck counts shown in Table 4. In actuality, the total truck volumes active at the site may fall below those considered in this study. Nighttime truck movements are not planned and so were not considered in this study. Such activities have the potential to be in contravention of the Corporation of the Town of Caledon noise by-law which prohibits loading and unloading activities during nighttime hours (23:00 – 7:00) if clearly audible in a residential area.

Truck movements were modelled assuming the following scenario:

- Trucks destined for Industrial Buildings 1 through 4 will enter from the northwest entrance and exit from the southwest exit on Heart Lake Road.
- Trucks destined for Industrial Buildings 5 & 6 will enter and exit from the future expansion road northeast of the site.

The full count of trucks outlined in Table 4 was modelled assuming a 50/50 distribution between the separate routes mentioned above. The results presented in this study may be subject to change if a significantly different distribution of truck counts is expected.

Per the Caledon By-law NO. 86-110, truck idling in excess of 5 minutes is generally prohibited with certain exceptions. As such, it is assumed that regular (unrefrigerated) truck idling will be kept to a minimum such that the contribution can be considered acoustically insignificant.

It is understood that refrigerated truck deliveries are not anticipated in this facility and accordingly were not considered in this study. Refrigerated trucks are generally louder than regular trucks and the refrigeration units produce steady noise during loading and unloading. If the use of refrigerated deliveries is anticipated in the future, this study should be revised to account for such activities.

Table 4: Worst-case truck counts

Truck Type	Daytime (07:00-19:00)	Evening (19:00-23:00)	Nighttime (23:00-7:00)
Regular Trucks	40	30	0
Refrigerated Trucks	0	0	0

The use of shunt trucks to relocate empty trailers is not planned. Operation of rooftop mechanical equipment was based on an assumed duty cycle of 50% at nighttime and in the evening (19:00 – 07:00) and 100% during the daytime (07:00 – 19:00).

4 Summary of Noise Control Recommendations

This report has been prepared in accordance with the MECP guidelines which were the basis for establishing the noise level limits, predicting the noise impact of the proposed facility, as well as recommendations of the noise controls. Noise mitigation is required for this development as described below.

An acoustic barrier with a minimum height of 3.5 m is required along the west side of the property in order for the noise impact at receptor R01 to fall below the sound level limits. The barrier is to be located as shown in Figure 3, with a total length of approximately 120 m starting from Heart Lake Road and continuing along the northwest property line.

Table 5 below provides the results of the maximum noise predictions at nearby noise-sensitive receptors based on a worst-case operating scenario including mitigation measures for the proposed development.

Table 5: Maximum Predicted Mitigated Sound Levels at Nearby Noise-Sensitive Receptors

Receptor	Time Period ¹	Predicted Noise Impact (dBA)	Sound Level Limit (dBA)	Compliance (Yes/No)
R01	Day	49	50	Yes
	Evening	47	50	Yes
	Night	44	45	Yes
R01g	Day	45	50	Yes
	Evening	42	45	Yes
	Night	-	-	Yes
R02	Day	45	50	Yes
	Evening	42	50	Yes
	Night	41	45	Yes
R02g	Day	43	50	Yes
	Evening	40	45	Yes
	Night	-	-	Yes
R03	Day	44	50	Yes
	Evening	41	50	Yes
	Night	39	45	Yes
R03g	Day	45	50	Yes
	Evening	42	45	Yes
	Night	-	-	Yes

Receptor	Time Period ¹	Predicted Noise Impact (dBA)	Sound Level Limit (dBA)	Compliance (Yes/No)
R04	Day	42	50	Yes
	Evening	39	50	Yes
	Night	38	45	Yes
R04g	Day	41	50	Yes
	Evening	38	45	Yes
	Night	-	-	Yes
R05	Day	46	50	Yes
	Evening	43	50	Yes
	Night	40	45	Yes
R05g	Day	44	50	Yes
	Evening	43	45	Yes
	Night	-	-	Yes
VL06	Day	50	50	Yes
	Evening – 4.5m	48	50	Yes
	Evening ² – 1.5m	47	45 ²	No
	Night	42	45	Yes

¹ – Daytime (07:00 – 19:00), Evening (19:00 – 23:00), Nighttime (23:00 – 07:00)

² – For added conservatism, evening operations at VL06 were evaluated against an evening sound level limit of 45 dBA at 1.5m height to account for potential future outdoor points of reception associated with VL06.

Per Table 5 above, the applicable MECP sound level limits are not exceeded at any of the existing noise-sensitive receptors most closely situated to the proposed development. Accordingly, the noise impact of the facility is predicted to meet the sound level limits at nearby existing receptors with implementation of the noise control measures described above. Figures 4a and 4b illustrate the predicted noise impact contours for 4.5 m (approximate height at second storey window) for the daytime and nighttime periods, respectively.

4.1 Vacant Lot Noise Control Measures

Per Table 5, the evening sound level limits for outdoor points of reception associated with VL06 are predicted to be exceeded. The MECP requires that noise control measures be identified which can reduce the noise impact at a Vacant Lot receptor to levels below the MECP limits.

It is to be noted that these noise controls are not required to be implemented until a building permit has been granted for a sensitive use on the lands designated as VL06 and should be revised to account for the as-built layout and orientation of the use if such a permit is granted.

The MECP sound level limits are expected to be satisfied with implementation of an additional acoustic barrier having a minimum height of 2.6 m and a length of approximately 100 m, situated along the shared barrier between the proposed site and the lands of VL06.

5 Conclusion

Aeroustics Engineering Limited was retained by Berkshire Axis Development to prepare a Noise Impact Study to support an application for Zoning By-law Amendment for proposed Industrial Warehouse developments in the Town of Caledon, Ontario.

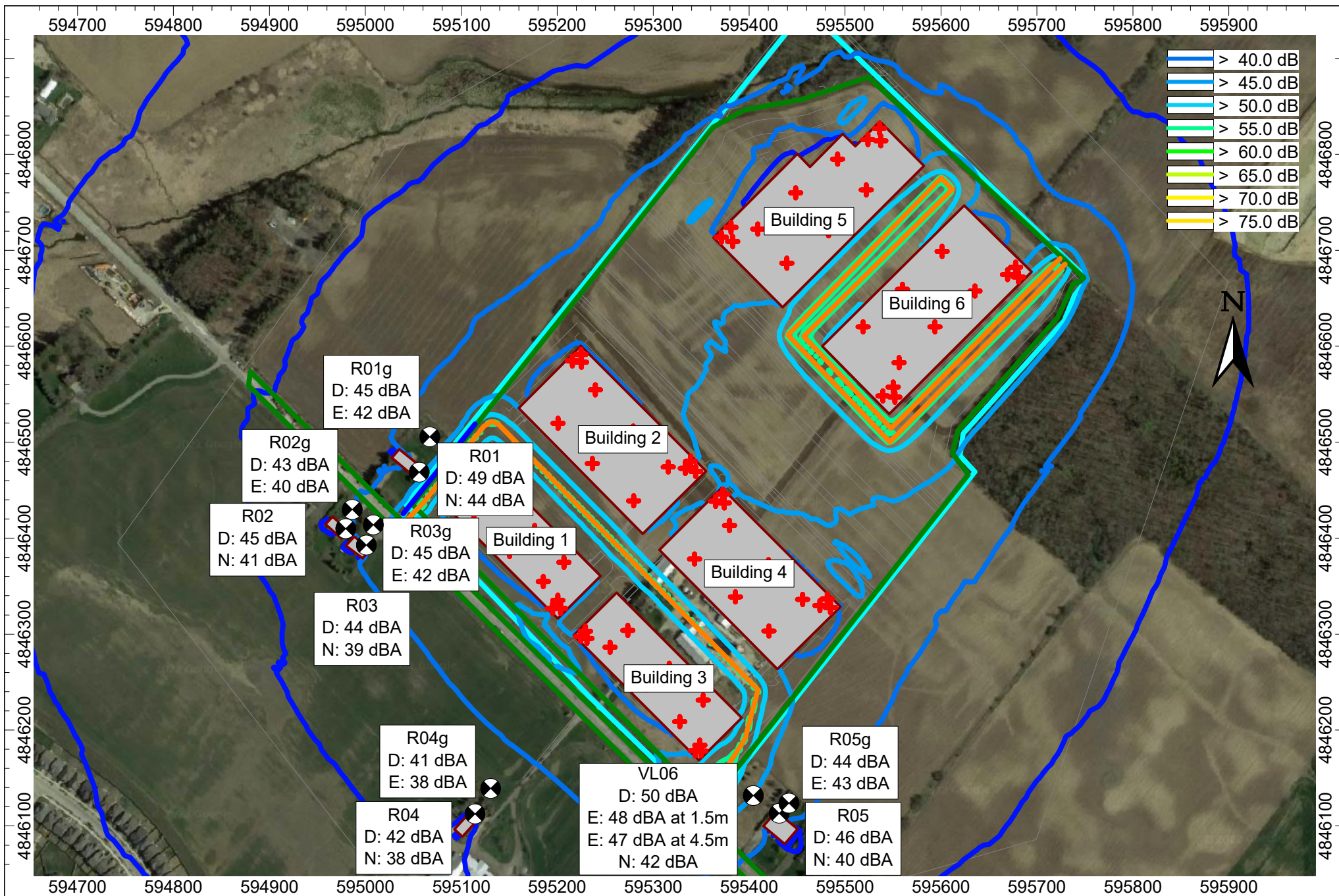
Based on the information available, the conclusions of this report are accurate as of the date it was signed and sealed. This report and associated calculations underwent a comprehensive internal review process to ensure minimization of errors and omissions.

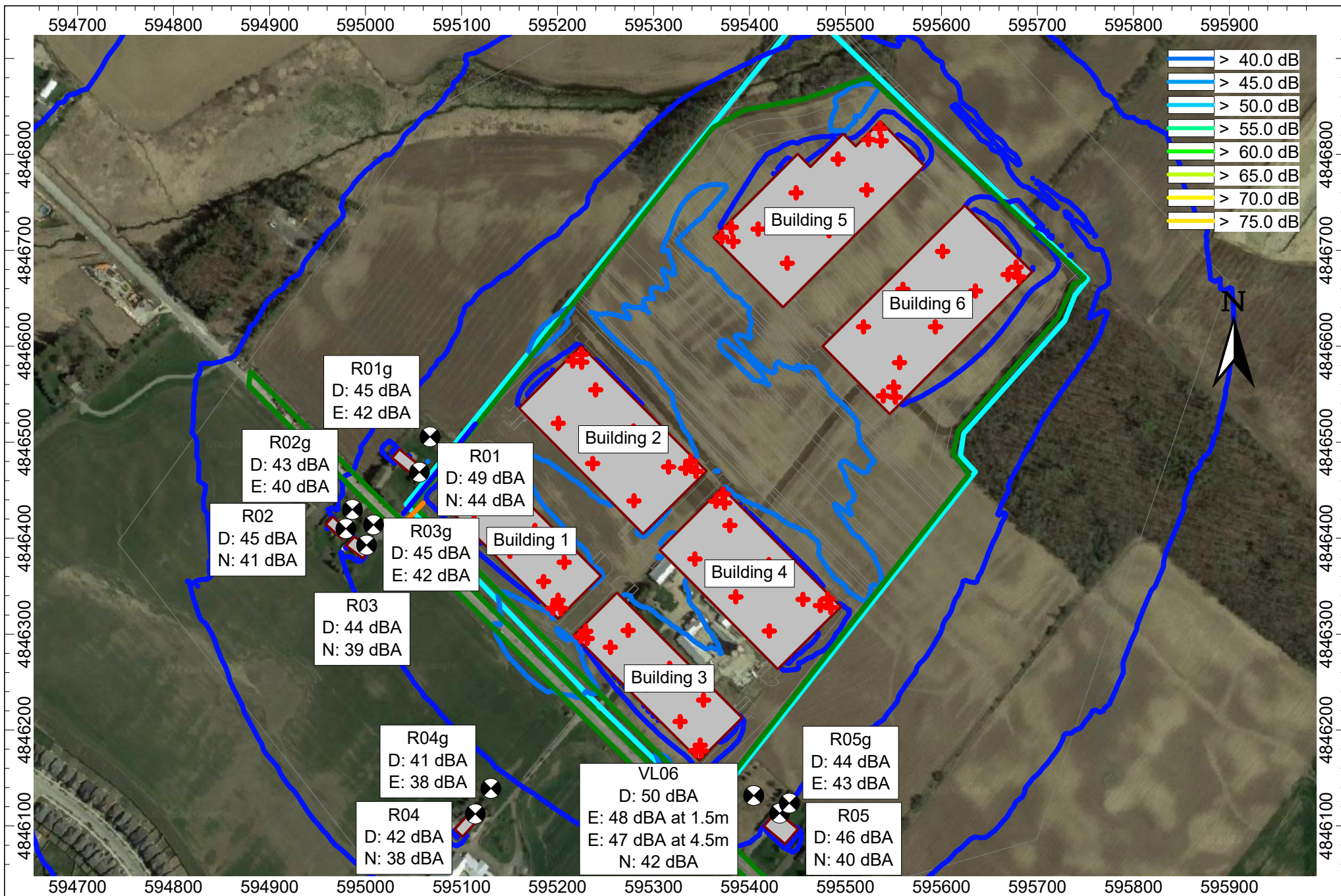
The sound levels at the nearby noise-sensitive receptors are predicted to comply with the noise guidelines of the MECP with implementation of a noise barrier as outlined in Section 4.



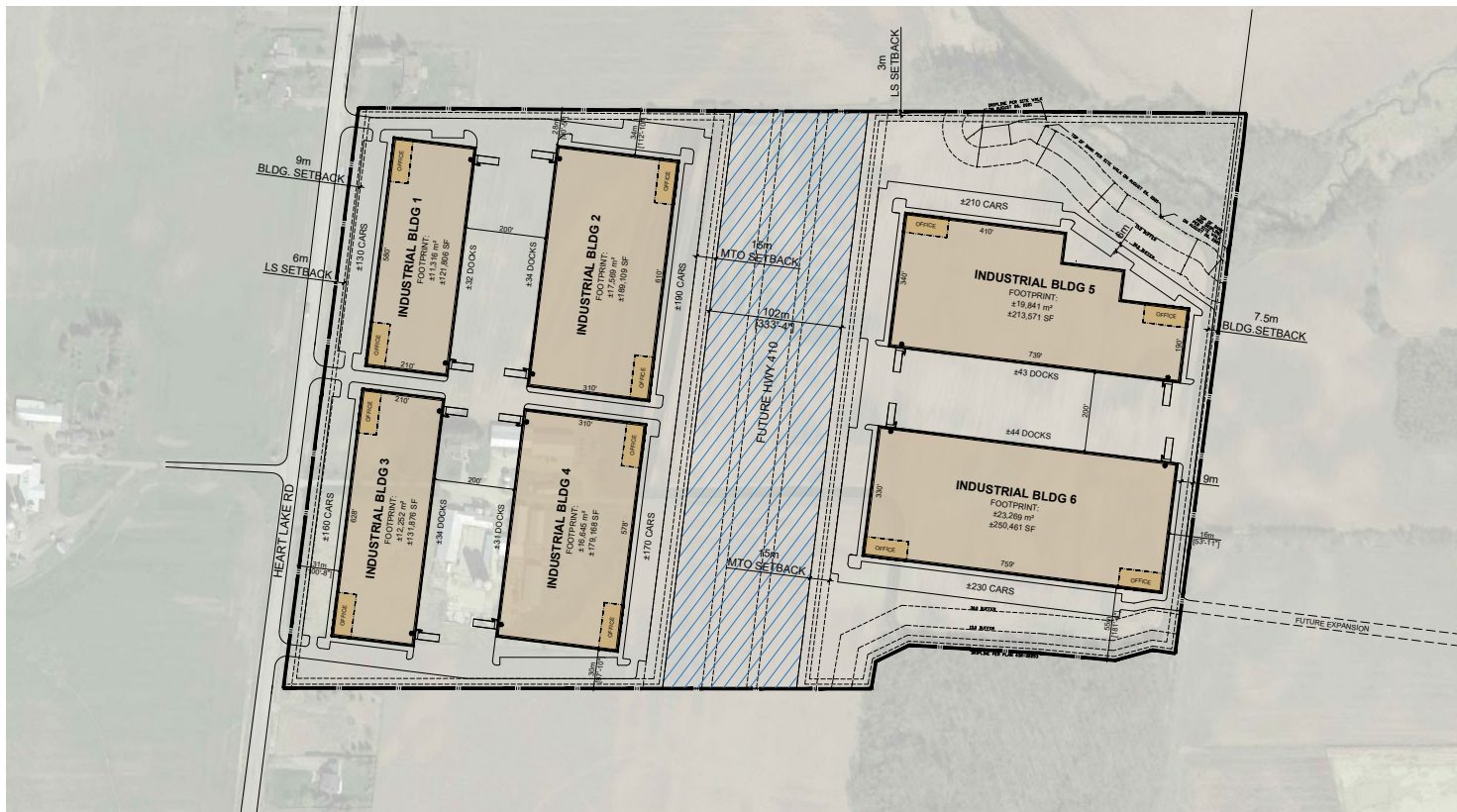








Appendix A
Site Plan Drawings



BUILDING 3			
▲ DOCK-HIGH DOORS	34		
● GRADE-LEVEL DOORS	2		
PARKING REQUIRED:			
WAREHOUSE			
<7000 m ²	7,000 m ²	78 STALLS	
7000-20000 m ²	4,639 m ²	32 STALLS	
OFFICE @ 5%	613 m ²	20 STALLS	
TOTAL		130 STALLS	

PARKING PROVIDED: 160 STALLS
@0.85/1000 SF @0.91/100 m²
REQ. ACCESSIBLE To be confirmed by City

BUILDING 4			
▲ DOCK-HIGH DOORS	31		
● GRADE-LEVEL DOORS	2		
PARKING REQUIRED:			
WAREHOUSE			
<7000 m ²	7,000 m ²	78 STALLS	
7000-20000 m ²	8,813 m ²	61 STALLS	
OFFICE @ 5%	832 m ²	28 STALLS	
TOTAL		166 STALLS	

PARKING PROVIDED: 170 STALLS
@0.9/1000 SF @0.97/100 m²
REQ. ACCESSIBLE To be confirmed by City

SITE AREA 2:			
GROSS:	29.79 AC	12.06 HA	
	1,297,740 SF	120,564 m ²	
EASEMENT:	@ 22%	26,359 m ²	
NET:	1,014,028 SF	94,206 m ²	
BUILDING 5			
FOOTPRINT:	213,571 SF	19,841 m ²	
GROSS:	250,461 SF	23,269 m ²	
TOTAL:	464,033 SF	43,110 m²	

FAR: 0.36
NET: 0.46
COVERAGE:
GROSS: 36%
NET: 46%

BUILDING 5			
▲ DOCK-HIGH DOORS	43		
● GRADE-LEVEL DOORS	2		
PARKING REQUIRED:			
WAREHOUSE			
<7000 m ²	7,000 m ²	78 STALLS	
7000-20000 m ²	12,841 m ²	89 STALLS	
OFFICE @ 5%	992 m ²	33 STALLS	
TOTAL		198 STALLS	

PARKING PROVIDED: 210 STALLS
@0.98/1000 SF @1.06/100 m²
REQ. ACCESSIBLE To be confirmed by City

BUILDING 6			
▲ DOCK-HIGH DOORS	44		
● GRADE-LEVEL DOORS	2		
PARKING REQUIRED:			
WAREHOUSE			
<7000 m ²	7,000 m ²	78 STALLS	
7000-20000 m ²	13,000 m ²	90 STALLS	
>20000 m ²	2,655 m ²	16 STALLS	
OFFICE @ 5%	1,133 m ²	38 STALLS	
TOTAL		221 STALLS	

PARKING PROVIDED: 230 STALLS
@0.94/1000 SF @1.02/100 m²
REQ. ACCESSIBLE To be confirmed by City

PROJECT DATA:			
TOTAL SITE AREA:			
GROSS:	72.64 AC	29.40 HA	
	3,164,261 SF	293,970 m ²	

PARKING REQUIREMENTS:			
WAREHOUSE			
<7000 m ²	1/90	m ²	
7000-20000 m ²	1/145	m ²	
>20000 m ²	1/170	m ²	
OFFICE	1/30	m²	

SITE AREA 1:			
GROSS:			
	31.62 AC	12.80 HA	
	1,377,507 SF	127,975 m ²	

BUILDING 1	121,806 SF	11,316 m ²
BUILDING 2	189,109 SF	17,569 m ²
BUILDING 3	131,876 SF	12,252 m ²
BUILDING 4	179,168 SF	16,645 m ²
TOTAL:	621,958 SF	57,782 m²

FAR:		
GROSS:	0.45	
NET:	0.45	
COVERAGE:		
GROSS:	45%	
NET:	45%	

BUILDING 1			
▲ DOCK-HIGH DOORS	32		
● GRADE-LEVEL DOORS	2		
PARKING REQUIRED:			
WAREHOUSE			
<7000 m ²	7,000 m ²	78 STALLS	
7000-20000 m ²	3,750 m ²	26 STALLS	
OFFICE @ 5%	566 m ²	19 STALLS	
TOTAL		123 STALLS	

PARKING PROVIDED: 130 STALLS
@1.07/1000 SF @1.15/100 m²
REQ. ACCESSIBLE To be confirmed by City

BUILDING 2			
▲ DOCK-HIGH DOORS	34		
● GRADE-LEVEL DOORS	2		
PARKING REQUIRED:			
WAREHOUSE			
<7000 m ²	7,000 m ²	78 STALLS	
7000-20000 m ²	9,690 m ²	67 STALLS	
OFFICE @ 5%	878 m ²	29 STALLS	
TOTAL		174 STALLS	

PARKING PROVIDED: 190 STALLS
@1.1/1000 SF @1.08/100 m²
REQ. ACCESSIBLE To be confirmed by City

DEVELOPMENT STANDARDS:	
ZONING:	MP
MAX. COVERAGE:	50%
MAX. HEIGHT:	18 m

BUILDING SETBACKS:	
FRONT:	9 m
SIDE:	7.5 m
REAR:	7.5 m

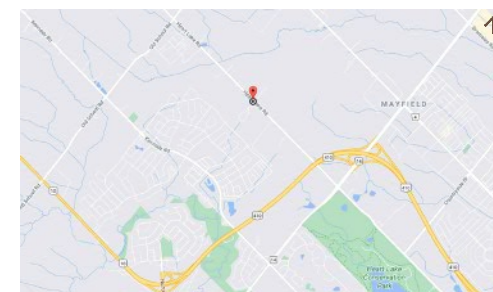
LANDSCAPE SETBACKS:	
FRONT:	6 m
SIDE:	3 m
REAR:	3 m

LANDSCAPE REQ.: 10%

OFF-STREET PARKING:	
STANDARD:	2.75X6 m
DRIVE AISLE:	6 m

REQ. PARKING RATIO BY USE:	
WAREHOUSE:	1/90 sq m
MANUF:	1/60 sq m
OFFICE:	1/30 sq m

NOTES:
1 a) If necessary office use and retail use floor areas are 10% or less of the total floor area (up to 100000 sq ft) or less of the total floor area (up to 100000 sq ft) or less of the total floor area (up to 100000 sq ft).
b) If necessary office use and retail use floor areas are more than 10% of the total floor area, it is subject to the conditions contained in 1a). The application use floor areas exceeding 10% shall be subject to the applicable office or retail parking requirements.
2 a) If necessary office and retail use floor areas are 10% or less of the total floor area (up to 100000 sq ft) or less of the total floor area (up to 100000 sq ft) or less of the total floor area (up to 100000 sq ft).
b) If necessary office and retail use floor areas are more than 10% of the total floor area, it is subject to the conditions contained in 1a). The application use floor areas exceeding 10% shall be subject to the applicable office or retail parking requirements.
3 3 m for all parking spaces.



scheme: 05

Conceptual Site Plan

Heart Lake Rd
Caledon, ON, Canada

WARE MALCOMB

TOR21-0126-00
11.16.2021

SHEET

1

Appendix B

Sound Power Data

Sound Power Data

Source Type	Source Description	Octave Band Centre Frequency (Hz)								Overall Level	
		63	125	250	500	1000	2000	4000	8000	dBA	dB
Rooftop Units	Rooftop Unit DFIAH	64	73	79	83	84	79	73	65	88	102
	Rooftop Unit HVAC	60	73	77	80	82	80	76	72	86	100
Trucks	Regular Truck Movements	97	101	100	97	93	90	83	76	99	106

Appendix C

Sample Calculations

Project: 12505 Heart Lake Road NIS
Project Number: 22169

Source ID	Source Name	Point of Reception R04		Point of Reception R04g		Point of Reception R05		Point of Reception R05g		Point of Reception VL06		Point of Reception VL06g	
		Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day
BN11_T01	RegFinal	302	26	273	24	339	39	340	37	282	42	279	40
BN11_T02	RegFinal	251	30	233	29	74	38	80	40	42	47	41	46
BN11_T02	RegFinal	320	24	298	23	493	11	494	7	460	12	460	9
BN11_T02	RegNortheast	699	26	671	22	528	32	525	29	534	31	534	27
A01_S37	Rooftop Unit	315	26	289	25	447	19	447	16	415	19	415	15
A01_S38	Rooftop Unit	335	21	308	21	447	19	446	16	415	19	415	15
A01_S39	Rooftop Unit	276	27	248	27	392	20	392	17	360	20	360	16
A01_S40	Rooftop Unit	302	22	273	23	390	20	389	17	358	20	358	16
A01_S59	Rooftop Unit	416	19	387	19	467	19	463	16	438	19	438	14
A01_S41	Rooftop Unit	253	28	223	28	345	21	345	18	312	21	313	17
A01_S42	Rooftop Unit	278	25	248	23	345	21	344	18	313	21	313	17
A01_S55	Rooftop Unit	385	20	355	20	413	20	409	17	384	20	385	15
A01_S60	Rooftop Unit	460	18	430	18	481	19	476	18	454	19	454	14
A01_S57	Rooftop Unit	366	22	335	22	359	22	354	24	332	21	332	17
A01_S56	Rooftop Unit	432	19	401	19	426	20	420	19	400	20	400	15
A01_S58	Rooftop Unit	414	19	383	19	379	21	373	20	354	21	354	16
A01_S43	Rooftop Unit	224	30	193	29	247	24	248	21	215	24	215	20
A01_S44	Rooftop Unit	249	24	219	25	248	28	247	25	216	28	216	25
A01_S49	Rooftop Unit	351	25	320	24	279	29	273	25	254	24	254	19
A01_S45	Rooftop Unit	223	30	195	29	193	27	194	23	161	27	161	23
A01_S50	Rooftop Unit	401	20	370	20	305	23	296	22	283	25	283	22
A01_S46	Rooftop Unit	253	24	225	24	190	27	188	24	159	30	159	27
A01_S53	Rooftop Unit	353	21	324	21	230	26	222	25	208	27	208	26
A01_S47	Rooftop Unit	234	29	209	28	141	30	143	27	109	31	109	28
A01_S54	Rooftop Unit	401	20	372	20	259	24	250	23	241	26	241	23
A01_S48	Rooftop Unit	266	23	240	24	142	30	140	28	113	31	113	27
A01_S51	Rooftop Unit	361	21	333	21	190	27	181	27	172	29	173	27
A01_S52	Rooftop Unit	408	20	380	19	224	25	213	25	211	27	211	25
A01_S67	Rooftop Unit	677	15	646	15	609	17	599	15	590	18	590	16
A01_S68	Rooftop Unit	659	16	628	15	573	17	563	16	556	18	556	16
A01_S65	Rooftop Unit	649	16	618	15	515	18	502	17	502	19	502	17
A01_S69	Rooftop Unit	728	15	698	14	647	16	636	15	630	17	630	15
A01_S70	Rooftop Unit	711	15	680	14	609	17	598	15	594	17	594	16
A01_S66	Rooftop Unit	645	16	615	15	486	19	473	19	476	19	476	17
A01_S61	Rooftop Unit	705	15	674	14	561	17	548	16	550	18	550	16
A01_S71	Rooftop Unit	780	14	749	13	685	16	673	14	669	17	669	15
A01_S72	Rooftop Unit	768	14	737	14	656	16	644	15	642	17	642	15
A01_S62	Rooftop Unit	698	15	668	14	532	22	519	17	524	18	524	17
A01_S63	Rooftop Unit	762	14	731	14	610	16	597	15	600	17	600	16
A01_S64	Rooftop Unit	754	15	724	14	581	21	568	19	574	19	574	16
A01_S07	Rooftop Unit Office	329	23	304	23	476	15	476	12	444	14	444	10
A01_S08	Rooftop Unit Office	334	22	309	22	476	15	476	12	444	14	444	10
A01_S09	Rooftop Unit Office	327	23	302	23	470	15	470	12	438	14	438	10
A01_S11	Rooftop Unit Office	239	26	209	27	320	18	321	14	288	17	288	13
A01_S13	Rooftop Unit Office	483	15	454	15	518	14	513	14	491	14	491	10
A01_S10	Rooftop Unit Office	229	26	199	27	319	18	320	15	286	17	286	13
A01_S15	Rooftop Unit Office	484	15	454	15	513	15	508	14	486	14	486	10
A01_S12	Rooftop Unit Office	232	26	202	27	312	19	313	15	280	17	280	13
A01_S14	Rooftop Unit Office	491	14	462	14	521	14	515	14	494	14	494	10
A01_S05	Rooftop Unit Office	222	27	192	27	277	20	278	16	245	19	245	14
A01_S04	Rooftop Unit Office	215	27	184	28	277	20	278	16	245	19	245	14
A01_S06	Rooftop Unit Office	217	27	186	28	271	20	272	16	239	19	239	14
A01_S16	Rooftop Unit Office	422	16	391	16	373	18	365	17	348	17	348	12
A01_S17	Rooftop Unit Office	431	16	400	16	378	18	371	17	355	17	355	12
A01_S18	Rooftop Unit Office	425	16	394	16	367	18	359	17	343	17	343	13
A01_S19	Rooftop Unit Office	411	16	380	16	332	19	324	18	309	21	309	19
A01_S20	Rooftop Unit Office	422	16	391	16	338	19	330	17	316	20	316	18
A01_S21	Rooftop Unit Office	415	16	385	16	329	19	320	18	307	21	307	19
A01_S25	Rooftop Unit Office	654	12	623	12	604	13	594	12	583	14	583	13
A01_S27	Rooftop Unit Office	654	12	624	12	598	13	588	12	578	14	578	13
A02_S02	Rooftop Unit Office	245	26	223	26	109	35	112	33	77	38	77	33
A01_S01	Rooftop Unit Office	239	26	217	26	110	35	113	33	77	38	77	33
A02_S03	Rooftop Unit Office	245	26	223	26	105	35	107	33	72	39	73	38
A01_S26	Rooftop Unit Office	667	12	636	12	613	13	603	12	593	14	593	13
A01_S22	Rooftop Unit Office	420	16	393	16	221	27	209	22	210	23	210	23

Project: 12505 Heart Lake Road NIS
Project Number: 22169

Source ID	Source Name	Point of Reception R04		Point of Reception R04g		Point of Reception R05		Point of Reception R05g		Point of Reception VL06		Point of Reception VL06g	
		Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day
A01_S23	Rooftop Unit Office	430	16	403	16	229	27	217	22	219	23	219	22
A01_S24	Rooftop Unit Office	428	16	401	16	221	27	208	27	212	28	212	27
A01_S31	Rooftop Unit Office	609	13	578	12	448	16	436	16	438	16	438	15
A01_S32	Rooftop Unit Office	623	12	592	12	460	16	447	17	450	16	450	15
A01_S33	Rooftop Unit Office	617	13	586	12	450	17	437	18	441	16	441	15
A01_S28	Rooftop Unit Office	813	10	782	10	708	12	697	11	694	12	694	11
A01_S30	Rooftop Unit Office	819	10	788	10	709	12	697	11	695	12	695	11
A01_S29	Rooftop Unit Office	830	10	798	10	722	11	710	11	708	12	708	11
A01_S34	Rooftop Unit Office	790	10	760	10	610	17	596	16	604	17	604	16
A01_S36	Rooftop Unit Office	796	10	766	10	612	17	598	16	607	17	607	16
A01_S35	Rooftop Unit Office	801	10	771	10	620	17	606	16	615	17	615	16
Total Level [dBA]			42		41		46		45		50		48

Project: 12505 Heart Lake Road NIS
Project Number: 22169

Source ID	Source Name	Point of Reception R04		Point of Reception R04g		Point of Reception R05		Point of Reception R05g		Point of Reception VL06		Point of Reception VL06g	
		Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day
BN11_T01	RegFinal	302	26	273	24	339	39	340	37	282	42	279	40
BN11_T02	RegFinal	251	30	233	29	74	38	80	40	42	47	41	46
BN11_T02	RegFinal	320	24	298	23	493	11	494	7	460	12	460	9
BN11_T02	RegNortheast	699	26	671	22	528	32	525	29	534	31	534	27
A01_S37	Rooftop Unit	315	26	289	25	447	19	447	16	415	19	415	15
A01_S38	Rooftop Unit	335	21	308	21	447	19	446	16	415	19	415	15
A01_S39	Rooftop Unit	276	27	248	27	392	20	392	17	360	20	360	16
A01_S40	Rooftop Unit	302	22	273	23	390	20	389	17	358	20	358	16
A01_S59	Rooftop Unit	416	19	387	19	467	19	463	16	438	19	438	14
A01_S41	Rooftop Unit	253	28	223	28	345	21	345	18	312	21	313	17
A01_S42	Rooftop Unit	278	25	248	23	345	21	344	18	313	21	313	17
A01_S55	Rooftop Unit	385	20	355	20	413	20	409	17	384	20	385	15
A01_S60	Rooftop Unit	460	18	430	18	481	19	476	18	454	19	454	14
A01_S57	Rooftop Unit	366	22	335	22	359	22	354	24	332	21	332	17
A01_S56	Rooftop Unit	432	19	401	19	426	20	420	19	400	20	400	15
A01_S58	Rooftop Unit	414	19	383	19	379	21	373	20	354	21	354	16
A01_S43	Rooftop Unit	224	30	193	29	247	24	248	21	215	24	215	20
A01_S44	Rooftop Unit	249	24	219	25	248	28	247	25	216	28	216	25
A01_S49	Rooftop Unit	351	25	320	24	279	29	273	25	254	24	254	19
A01_S45	Rooftop Unit	223	30	195	29	193	27	194	23	161	27	161	23
A01_S50	Rooftop Unit	401	20	370	20	305	23	296	22	283	25	283	22
A01_S46	Rooftop Unit	253	24	225	24	190	27	188	24	159	30	159	27
A01_S53	Rooftop Unit	353	21	324	21	230	26	222	25	208	27	208	26
A01_S47	Rooftop Unit	234	29	209	28	141	30	143	27	109	31	109	28
A01_S54	Rooftop Unit	401	20	372	20	259	24	250	23	241	26	241	23
A01_S48	Rooftop Unit	266	23	240	24	142	30	140	28	113	31	113	27
A01_S51	Rooftop Unit	361	21	333	21	190	27	181	27	172	29	173	27
A01_S52	Rooftop Unit	408	20	380	19	224	25	213	25	211	27	211	25
A01_S67	Rooftop Unit	677	15	646	15	609	17	599	15	590	18	590	16
A01_S68	Rooftop Unit	659	16	628	15	573	17	563	16	556	18	556	16
A01_S65	Rooftop Unit	649	16	618	15	515	18	502	17	502	19	502	17
A01_S69	Rooftop Unit	728	15	698	14	647	16	636	15	630	17	630	15
A01_S70	Rooftop Unit	711	15	680	14	609	17	598	15	594	17	594	16
A01_S66	Rooftop Unit	645	16	615	15	486	19	473	19	476	19	476	17
A01_S61	Rooftop Unit	705	15	674	14	561	17	548	16	550	18	550	16
A01_S71	Rooftop Unit	780	14	749	13	685	16	673	14	669	17	669	15
A01_S72	Rooftop Unit	768	14	737	14	656	16	644	15	642	17	642	15
A01_S62	Rooftop Unit	698	15	668	14	532	22	519	17	524	18	524	17
A01_S63	Rooftop Unit	762	14	731	14	610	16	597	15	600	17	600	16
A01_S64	Rooftop Unit	754	15	724	14	581	21	568	19	574	19	574	16
A01_S07	Rooftop Unit Office	329	23	304	23	476	15	476	12	444	14	444	10
A01_S08	Rooftop Unit Office	334	22	309	22	476	15	476	12	444	14	444	10
A01_S09	Rooftop Unit Office	327	23	302	23	470	15	470	12	438	14	438	10
A01_S11	Rooftop Unit Office	239	26	209	27	320	18	321	14	288	17	288	13
A01_S13	Rooftop Unit Office	483	15	454	15	518	14	513	14	491	14	491	10
A01_S10	Rooftop Unit Office	229	26	199	27	319	18	320	15	286	17	286	13
A01_S15	Rooftop Unit Office	484	15	454	15	513	15	508	14	486	14	486	10
A01_S12	Rooftop Unit Office	232	26	202	27	312	19	313	15	280	17	280	13
A01_S14	Rooftop Unit Office	491	14	462	14	521	14	515	14	494	14	494	10
A01_S05	Rooftop Unit Office	222	27	192	27	277	20	278	16	245	19	245	14
A01_S04	Rooftop Unit Office	215	27	184	28	277	20	278	16	245	19	245	14
A01_S06	Rooftop Unit Office	217	27	186	28	271	20	272	16	239	19	239	14
A01_S16	Rooftop Unit Office	422	16	391	16	373	18	365	17	348	17	348	12
A01_S17	Rooftop Unit Office	431	16	400	16	378	18	371	17	355	17	355	12
A01_S18	Rooftop Unit Office	425	16	394	16	367	18	359	17	343	17	343	13
A01_S19	Rooftop Unit Office	411	16	380	16	332	19	324	18	309	21	309	19
A01_S20	Rooftop Unit Office	422	16	391	16	338	19	330	17	316	20	316	18
A01_S21	Rooftop Unit Office	415	16	385	16	329	19	320	18	307	21	307	19
A01_S25	Rooftop Unit Office	654	12	623	12	604	13	594	12	583	14	583	13
A01_S27	Rooftop Unit Office	654	12	624	12	598	13	588	12	578	14	578	13
A02_S02	Rooftop Unit Office	245	26	223	26	109	35	112	33	77	38	77	33
A01_S01	Rooftop Unit Office	239	26	217	26	110	35	113	33	77	38	77	33
A02_S03	Rooftop Unit Office	245	26	223	26	105	35	107	33	72	39	73	38
A01_S26	Rooftop Unit Office	667	12	636	12	613	13	603	12	593	14	593	13
A01_S22	Rooftop Unit Office	420	16	393	16	221	27	209	22	210	23	210	23

Project: 12505 Heart Lake Road NIS
Project Number: 22169

Source ID	Source Name	Point of Reception R04		Point of Reception R04g		Point of Reception R05		Point of Reception R05g		Point of Reception VL06		Point of Reception VL06g	
		Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day	Distance to POR (m)	Sound Level at POR (dBA) Day
A01_S23	Rooftop Unit Office	430	16	403	16	229	27	217	22	219	23	219	22
A01_S24	Rooftop Unit Office	428	16	401	16	221	27	208	27	212	28	212	27
A01_S31	Rooftop Unit Office	609	13	578	12	448	16	436	16	438	16	438	15
A01_S32	Rooftop Unit Office	623	12	592	12	460	16	447	17	450	16	450	15
A01_S33	Rooftop Unit Office	617	13	586	12	450	17	437	18	441	16	441	15
A01_S28	Rooftop Unit Office	813	10	782	10	708	12	697	11	694	12	694	11
A01_S30	Rooftop Unit Office	819	10	788	10	709	12	697	11	695	12	695	11
A01_S29	Rooftop Unit Office	830	10	798	10	722	11	710	11	708	12	708	11
A01_S34	Rooftop Unit Office	790	10	760	10	610	17	596	16	604	17	604	16
A01_S36	Rooftop Unit Office	796	10	766	10	612	17	598	16	607	17	607	16
A01_S35	Rooftop Unit Office	801	10	771	10	620	17	606	16	615	17	615	16
Total Level [dBA]			42		41		46		45		50		48

Receiver: R01
 Project: 12505 Heart Lake Road NIS
 Project Number: 22169

Time Period	Total (dBA)
Day	49

Receiver Name	Receiver ID	X	Y	Z
R01	R01	595056.12 m	4846468.87 m	4.50 m

Source ID	Source Name	X	Y	Z	Refl.	Lw	L/A	Freq	Adiv	K0	Agr	Abar	Aatm	Afol	Ahous	Cmet	Dc	RL	Lr
BN11_T01	RegFinal	595063.6	4846440.9	2.4	0	67	10.3	A	40.3	0.0	-0.9	5.0	0.1	0.0	0.0	0.0	0.0	0.0	33
BN11_T01	RegFinal	595070.1	4846449.3	2.4	0	67	10.3	A	38.7	0.0	-0.5	5.0	0.1	0.0	0.0	0.0	0.0	0.0	34
BN11_T01	RegFinal	595076.7	4846457.7	2.4	0	67	10.3	A	38.4	0.0	-0.8	5.1	0.1	0.0	0.0	0.0	0.0	0.0	35
BN11_T01	RegFinal	595083.3	4846466.0	2.4	0	67	10.3	A	39.8	0.0	-0.7	5.0	0.1	0.0	0.0	0.0	0.0	0.0	33
BN11_T01	RegFinal	595070.4	4846449.7	2.4	1	67	8.7	A	44.1	0.0	-1.6	0.0	0.2	0.0	0.0	0.0	0.0	2.0	31
BN11_T01	RegFinal	595075.1	4846455.5	2.4	1	67	8.7	A	44.3	0.0	-1.8	0.0	0.2	0.0	0.0	0.0	0.0	2.0	31
BN11_T01	RegFinal	595079.7	4846461.4	2.4	1	67	8.7	A	44.7	0.0	-1.8	0.0	0.2	0.0	0.0	0.0	0.0	2.0	31
BN11_T01	RegFinal	595084.3	4846467.3	2.4	1	67	8.7	A	45.2	0.0	-1.8	0.0	0.2	0.0	0.0	0.0	0.0	2.0	30
BN11_T01	RegFinal	595090.5	4846475.1	2.4	0	67	10.9	A	41.9	0.0	-0.4	4.8	0.2	0.0	0.0	0.0	0.0	0.0	32
BN11_T01	RegFinal	595098.2	4846484.8	2.4	0	67	10.9	A	44.1	0.0	-0.6	4.7	0.2	0.0	0.0	0.0	0.0	0.0	30
BN11_T01	RegFinal	595109.8	4846499.3	2.4	0	67	13.9	A	46.8	0.0	-0.3	4.5	0.3	0.0	0.0	0.0	0.0	0.0	30
BN11_T01	RegFinal	595088.2	4846472.3	2.4	1	67	7.3	A	45.8	0.0	-1.7	0.0	0.2	0.0	0.0	0.0	0.0	2.0	28
BN11_T01	RegFinal	595093.4	4846478.7	2.4	1	67	10.4	A	46.5	0.0	-1.8	0.0	0.3	0.0	0.0	0.0	0.0	2.0	31
BN11_T01	RegFinal	595100.3	4846487.4	2.4	1	67	10.4	A	47.6	0.0	-1.9	0.0	0.3	0.0	0.0	0.0	0.0	2.0	30
BN11_T01	RegFinal	595110.6	4846500.4	2.4	1	67	13.5	A	49.1	0.0	-2.1	0.0	0.4	0.0	0.0	0.0	0.0	2.0	31
BN11_T01	RegFinal	595150.4	4846506.8	2.4	0	67	15.2	A	51.1	0.0	-2.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	33
BN11_T01	RegFinal	595173.9	4846482.8	2.4	0	67	15.4	A	52.5	0.0	-2.7	14.3	0.5	0.0	0.0	0.0	0.0	0.0	18
BN11_T01	RegFinal	595154.6	4846502.5	2.4	1	67	14.5	A	54.8	0.0	-2.5	0.0	0.6	0.0	0.0	0.0	0.0	2.0	27
BN11_T01	RegFinal	595174.4	4846482.3	2.4	1	67	14.5	A	55.3	0.0	-2.6	0.0	0.7	0.0	0.0	0.0	0.0	2.0	26
BN11_T01	RegFinal	595120.6	4846513.0	2.4	0	67	10.0	A	48.9	0.0	-0.5	4.5	0.3	0.0	0.0	0.0	0.0	0.0	24
BN11_T01	RegFinal	595120.6	4846513.0	2.4	1	67	10.0	A	50.5	0.0	-2.5	0.0	0.4	0.0	0.0	0.0	0.0	2.0	27
BN11_T01	RegFinal	595127.8	4846519.2	2.4	0	67	9.7	A	49.9	0.0	-0.4	4.5	0.4	0.0	0.0	0.0	0.0	0.0	23
BN11_T01	RegFinal	595126.9	4846518.7	2.4	1	67	8.5	A	51.1	0.0	-2.5	0.0	0.4	0.0	0.0	0.0	0.0	2.0	25
BN11_T01	RegFinal	595133.5	4846520.8	2.4	0	67	5.4	A	50.4	0.0	-1.2	4.7	0.4	0.0	0.0	0.0	0.0	0.0	18
BN11_T01	RegFinal	595137.0	4846519.4	2.4	0	67	6.2	A	50.6	0.0	-1.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	24
BN11_T02	RegFinal	595055.3	4846431.6	2.4	0	70	11.4	A	42.4	0.0	-0.4	4.8	0.2	0.0	0.0	0.0	0.0	0.0	35
BN11_T02	RegFinal	595045.8	4846421.5	2.4	0	70	11.4	A	44.7	0.0	0.8	4.2	0.2	0.0	0.0	0.0	0.0	0.0	32
BN11_T02	RegFinal	595355.6	4846137.7	2.4	0	74	13.1	A	64.0	0.0	-4.3	8.6	2.0	0.0	0.0	0.0	0.0	0.0	17
BN11_T02	RegNortheast	595467.9	4846639.9	2.4	0	67	19.0	A	64.0	0.0	-4.1	9.4	1.6	0.0	0.0	0.0	0.0	0.0	15
BN11_T02	RegNortheast	595494.5	4846647.5	2.4	0	67	20.2	A	64.5	0.0	-4.2	8.7	1.6	0.0	0.0	0.0	0.0	0.0	17
BN11_T02	RegNortheast	595550.7	4846703.2	2.4	1	67	22.3	A	66.0	0.0	-4.4	7.0	1.9	0.0	0.0	0.0	0.0	2.3	17
A01_S37	Rooftop Unit	595113.0	4846427.4	13.7	0	88	0.0	A	48.0	0.0	-2.3	10.4	0.3	0.0	0.0	0.0	0.0	0.0	32
A01_S38	Rooftop Unit	595133.9	4846446.7	13.7	0	88	0.0	A	49.2	0.0	-2.3	10.1	0.3	0.0	0.0	0.0	0.0	0.0	31
A01_S38	Rooftop Unit	595133.9	4846446.7	13.7	1	88	0.0	A	57.6	0.0	-2.3	0.0	0.8	0.0	0.0	0.0	0.0	2.2	30
A01_S39	Rooftop Unit	595150.3	4846386.2	13.7	0	88	0.0	A	53.0	0.0	-2.6	11.9	0.5	0.0	0.0	0.0	0.0	0.0	25
A01_S40	Rooftop Unit	595176.6	4846407.9	13.7	0	88	0.0	A	53.6	0.0	-2.7	11.8	0.6	0.0	0.0	0.0	0.0	0.0	25
A01_S59	Rooftop Unit	595200.8	4846519.7	13.7	0	88	0.0	A	54.7	0.0	-2.4	0.0	0.6	0.0	0.0	0.0	0.0	0.0	35
A01_S41	Rooftop Unit	595185.6	4846354.8	13.7	0	88	0.0	A	55.8	0.0	-2.7	12.0	0.7	0.0	0.0	0.0	0.0	0.0	22
A01_S42	Rooftop Unit	595207.0	4846374.8	13.7	0	88	0.0	A	56.0	0.0	-2.7	12.0	0.7	0.0	0.0	0.0	0.0	0.0	22
A01_S55	Rooftop Unit	595236.6	4846477.7	13.7	0	88	0.0	A	56.2	0.0	-2.6	9.2	0.7	0.0	0.0	0.0	0.0	0.0	25
A01_S60	Rooftop Unit	595239.7	4846554.7	13.7	0	88	0.0	A	57.1	0.0	-2.3	5.0	0.8	0.0	0.0	0.0	0.0	0.0	28
A01_S57	Rooftop Unit	595279.8	4846439.0	13.7	0	88	0.0	A	58.1	0.0	-2.6	10.4	0.9	0.0	0.0	0.0	0.0	0.0	21
A01_S56	Rooftop Unit	595279.2	4846511.6	13.7	0	88	0.0	A	58.1	0.0	-2.5	8.6	0.9	0.0	0.0	0.0	0.0	0.0	23
A01_S58	Rooftop Unit	595315.6	4846474.3	13.7	0	88	0.0	A	59.3	0.0	-2.7	9.7	1.0	0.0	0.0	0.0	0.0	0.0	21
A01_S43	Rooftop Unit	595255.1	4846286.3	13.7	0	88	0.0	A	59.6	0.0	-2.7	11.5	1.0	0.0	0.0	0.0	0.0	0.0	19

Receiver: R01
 Project: 12505 Heart Lake Road NIS
 Project Number: 22169

Time Period	Total (dBA)
Day	49

Receiver Name	Receiver ID	X	Y	Z
R01	R01	595056.12 m	4846468.87 m	4.50 m

Source ID	Source Name	X	Y	Z	Refl.	Lw	L/A	Freq	Adiv	K0	Agr	Abar	Aatm	Afol	Ahous	Cmet	Dc	RL	Lr
A01_S44	Rooftop Unit	595273.6	4846304.0	13.7	0	88	0.0	A	59.7	0.0	-2.7	11.7	1.0	0.0	0.0	0.0	0.0	0.0	19
A01_S49	Rooftop Unit	595343.1	4846378.2	13.7	0	88	0.0	A	60.6	0.0	-2.7	10.8	1.1	0.0	0.0	0.0	0.0	0.0	18
A01_S45	Rooftop Unit	595292.7	4846247.1	13.7	0	88	0.0	A	61.2	0.0	-2.7	11.2	1.2	0.0	0.0	0.0	0.0	0.0	17
A01_S50	Rooftop Unit	595379.5	4846413.2	13.7	0	88	0.0	A	61.3	0.0	-2.7	10.2	1.2	0.0	0.0	0.0	0.0	0.0	18
A01_S46	Rooftop Unit	595316.8	4846264.5	13.7	0	88	0.0	A	61.4	0.0	-2.8	11.3	1.2	0.0	0.0	0.0	0.0	0.0	17
A01_S53	Rooftop Unit	595385.7	4846338.7	13.7	0	88	0.0	A	62.0	0.0	-2.7	10.8	1.3	0.0	0.0	0.0	0.0	0.0	17
A01_S47	Rooftop Unit	595327.7	4846208.7	13.7	0	88	0.0	A	62.5	0.0	-2.8	10.8	1.3	0.0	0.0	0.0	0.0	0.0	16
A01_S54	Rooftop Unit	595420.1	4846372.3	13.7	0	88	0.0	A	62.5	0.0	-2.7	10.2	1.3	0.0	0.0	0.0	0.0	0.0	17
A01_S48	Rooftop Unit	595352.1	4846231.1	13.7	0	88	0.0	A	62.6	0.0	-2.8	11.0	1.3	0.0	0.0	0.0	0.0	0.0	16
A01_S51	Rooftop Unit	595420.7	4846303.1	13.7	0	88	0.0	A	63.1	0.0	-2.7	10.6	1.4	0.0	0.0	0.0	0.0	0.0	16
A01_S52	Rooftop Unit	595455.7	4846336.2	13.7	0	88	0.0	A	63.5	0.0	-2.8	10.1	1.5	0.0	0.0	0.0	0.0	0.0	16
A01_S67	Rooftop Unit	595409.0	4846722.1	13.7	0	88	0.0	A	63.8	0.0	-2.1	4.0	1.5	0.0	0.0	0.0	0.0	0.0	21
A01_S68	Rooftop Unit	595439.3	4846686.5	13.7	0	88	0.0	A	63.9	0.0	-2.4	4.9	1.5	0.0	0.0	0.0	0.0	0.0	20
A01_S65	Rooftop Unit	595518.9	4846620.2	13.7	0	88	0.0	A	64.8	0.0	-2.6	4.9	1.7	0.0	0.0	0.0	0.0	0.0	20
A01_S69	Rooftop Unit	595448.6	4846759.9	13.7	0	88	0.0	A	64.8	0.0	-2.2	4.6	1.7	0.0	0.0	0.0	0.0	0.0	19
A01_S70	Rooftop Unit	595482.9	4846720.3	13.7	0	88	0.0	A	64.9	0.0	-2.4	4.9	1.7	0.0	0.0	0.0	0.0	0.0	19
A01_S66	Rooftop Unit	595556.2	4846582.9	13.7	0	88	0.0	A	65.2	0.0	-2.7	6.5	1.7	0.0	0.0	0.0	0.0	0.0	17
A01_S61	Rooftop Unit	595559.8	4846659.4	13.7	0	88	0.0	A	65.6	0.0	-2.6	4.8	1.8	0.0	0.0	0.0	0.0	0.0	19
A01_S71	Rooftop Unit	595492.2	4846795.0	13.7	0	88	0.0	A	65.7	0.0	-2.2	4.6	1.8	0.0	0.0	0.0	0.0	0.0	18
A01_S72	Rooftop Unit	595522.0	4846763.0	13.7	0	88	0.0	A	65.8	0.0	-2.4	4.9	1.8	0.0	0.0	0.0	0.0	0.0	18
A01_S62	Rooftop Unit	595593.6	4846620.2	13.7	0	88	0.0	A	65.9	0.0	-2.7	4.8	1.9	0.0	0.0	0.0	0.0	0.0	18
A01_S63	Rooftop Unit	595601.2	4846699.0	13.7	0	88	0.0	A	66.4	0.0	-2.8	4.8	2.0	0.0	0.0	0.0	0.0	0.0	18
A01_S64	Rooftop Unit	595635.4	4846657.6	13.7	0	88	0.0	A	66.7	0.0	-2.9	4.8	2.0	0.0	0.0	0.0	0.0	0.0	18
A01_S07	Rooftop Unit Office	595085.5	4846440.0	13.7	0	86	0.0	A	43.5	0.0	-2.0	4.8	0.5	0.0	0.0	0.0	0.0	0.0	39
A01_S08	Rooftop Unit Office	595090.6	4846445.2	13.7	0	86	0.0	A	43.6	0.0	-1.9	0.0	0.5	0.0	0.0	0.0	0.0	0.0	44
A01_S09	Rooftop Unit Office	595092.5	4846439.0	13.7	0	86	0.0	A	44.6	0.0	-2.1	7.7	0.5	0.0	0.0	0.0	0.0	0.0	35
A01_S11	Rooftop Unit Office	595200.7	4846335.4	13.7	0	86	0.0	A	56.9	0.0	-2.7	14.1	1.6	0.0	0.0	0.0	0.0	0.0	16
A01_S13	Rooftop Unit Office	595215.8	4846584.7	13.7	0	86	0.0	A	56.9	0.0	-1.9	0.0	1.6	0.0	0.0	0.0	0.0	0.0	29
A01_S10	Rooftop Unit Office	595195.1	4846327.0	13.7	0	86	0.0	A	57.0	0.0	-2.7	13.4	1.7	0.0	0.0	0.0	0.0	0.0	17
A01_S15	Rooftop Unit Office	595225.3	4846583.3	13.7	0	86	0.0	A	57.2	0.0	-2.1	4.6	1.7	0.0	0.0	0.0	0.0	0.0	25
A01_S12	Rooftop Unit Office	595203.5	4846326.7	13.7	0	86	0.0	A	57.2	0.0	-2.7	13.9	1.7	0.0	0.0	0.0	0.0	0.0	16
A01_S14	Rooftop Unit Office	595224.8	4846591.4	13.7	0	86	0.0	A	57.4	0.0	-1.9	2.6	1.7	0.0	0.0	0.0	0.0	0.0	26
A01_S04	Rooftop Unit Office	595224.4	4846297.5	13.7	0	86	0.0	A	58.6	0.0	-2.7	13.2	1.9	0.0	0.0	0.0	0.0	0.0	15
A01_S16	Rooftop Unit Office	595333.5	4846472.8	13.7	0	86	0.0	A	59.9	0.0	-2.7	11.3	2.1	0.0	0.0	0.0	0.0	0.0	15
A01_S17	Rooftop Unit Office	595339.0	4846480.2	13.7	0	86	0.0	A	60.0	0.0	-2.7	11.1	2.2	0.0	0.0	0.0	0.0	0.0	16
A01_S18	Rooftop Unit Office	595344.2	4846469.6	13.7	0	86	0.0	A	60.2	0.0	-2.7	11.3	2.2	0.0	0.0	0.0	0.0	0.0	15
A01_S25	Rooftop Unit Office	595370.9	4846713.7	13.7	0	86	0.0	A	63.0	0.0	-2.0	1.8	2.8	0.0	0.0	0.0	0.0	0.0	20
A01_S27	Rooftop Unit Office	595382.9	4846709.2	13.7	0	86	0.0	A	63.2	0.0	-2.1	3.9	2.8	0.0	0.0	0.0	0.0	0.0	18
A01_S26	Rooftop Unit Office	595381.2	4846723.9	13.7	0	86	0.0	A	63.3	0.0	-2.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	22

Receiver: R01g
 Project: 12505 Heart Lake Road NIS
 Project Number: 22169

Time Period	Total (dBA)
Day	45

Receiver Name	Receiver ID	X	Y	Z
R01g	R01g	595067.09 m	4846505.63 m	1.50 m

Source ID	Source Name	X	Y	Z	Refl.	Lw	L/A	Freq	Adiv	K0	Agr	Abar	Aatm	Afol	Ahous	Cmet	Dc	RL	Lr
BN11_T01	RegFinal	595146.8	4846510.5	2.4	0	67	13.5	A	49.0	0.0	1.0	5.2	0.4	0.0	0.0	0.0	0.0	0.0	25
BN11_T01	RegFinal	595162.6	4846494.3	2.4	0	67	13.5	A	50.7	0.0	0.2	5.7	0.4	0.0	0.0	0.0	0.0	0.0	24
BN11_T01	RegFinal	595186.3	4846470.1	2.4	0	67	16.5	A	52.9	0.0	-0.4	5.9	0.5	0.0	0.0	0.0	0.0	0.0	25
BN11_T01	RegFinal	595151.9	4846505.3	2.4	1	67	6.8	A	53.2	0.0	0.7	0.0	0.5	0.0	0.0	0.0	0.0	2.0	18
BN11_T01	RegFinal	595164.6	4846492.3	2.4	1	67	15.0	A	53.8	0.0	0.4	4.5	0.6	0.0	0.0	0.0	0.0	2.0	21
BN11_T01	RegFinal	595186.6	4846469.8	2.4	1	67	15.0	A	55.0	0.0	-0.4	5.1	0.6	0.0	0.0	0.0	0.0	2.3	20
BN11_T01	RegFinal	595219.7	4846435.9	2.4	1	67	18.0	A	56.8	0.0	-1.1	5.4	0.8	0.0	0.0	0.0	0.0	2.3	21
BN11_T01	RegFinal	595264.3	4846390.3	2.4	1	67	18.1	A	58.9	0.0	-1.6	5.4	1.0	0.0	0.0	0.0	0.0	2.3	19
BN11_T01	RegFinal	595090.5	4846475.1	2.4	0	67	10.9	A	42.7	0.0	0.9	7.5	0.2	0.0	0.0	0.0	0.0	0.0	27
BN11_T01	RegFinal	595098.2	4846484.8	2.4	0	67	10.9	A	42.5	0.0	0.6	7.8	0.2	0.0	0.0	0.0	0.0	0.0	27
BN11_T01	RegFinal	595105.9	4846494.5	2.4	0	67	10.9	A	43.1	0.0	0.7	7.5	0.2	0.0	0.0	0.0	0.0	0.0	27
BN11_T01	RegFinal	595113.6	4846504.2	2.4	0	67	10.9	A	44.4	0.0	1.1	6.8	0.2	0.0	0.0	0.0	0.0	0.0	26
BN11_T01	RegFinal	595089.6	4846473.9	2.4	1	67	9.8	A	47.6	0.0	0.3	6.4	0.3	0.0	0.0	0.0	0.0	2.0	20
BN11_T01	RegFinal	595095.5	4846481.4	2.4	1	67	9.8	A	47.7	0.0	0.4	6.4	0.3	0.0	0.0	0.0	0.0	2.0	20
BN11_T01	RegFinal	595104.4	4846492.6	2.4	1	67	12.8	A	48.1	0.0	0.2	6.5	0.3	0.0	0.0	0.0	0.0	2.0	23
BN11_T01	RegFinal	595112.0	4846502.2	2.4	1	67	7.4	A	48.7	0.0	0.4	6.2	0.3	0.0	0.0	0.0	0.0	2.0	17
BN11_T01	RegFinal	595066.8	4846445.1	2.4	0	67	13.3	A	46.6	0.0	1.9	5.8	0.3	0.0	0.0	0.0	0.0	0.0	26
BN11_T01	RegFinal	595080.0	4846461.8	2.4	0	67	13.3	A	44.2	0.0	0.9	7.0	0.2	0.0	0.0	0.0	0.0	0.0	28
BN11_T01	RegFinal	595070.2	4846449.3	2.4	1	67	12.5	A	48.3	0.0	0.9	5.6	0.3	0.0	0.0	0.0	0.0	2.0	22
BN11_T01	RegFinal	595081.1	4846463.3	2.4	1	67	12.5	A	47.7	0.0	0.5	6.2	0.3	0.0	0.0	0.0	0.0	2.0	23
BN11_T01	RegFinal	595120.6	4846513.0	2.4	0	67	10.0	A	45.7	0.0	1.6	6.0	0.2	0.0	0.0	0.0	0.0	0.0	24
BN11_T01	RegFinal	595127.8	4846519.2	2.4	0	67	9.7	A	46.9	0.0	1.7	5.0	0.3	0.0	0.0	0.0	0.0	0.0	23
BN11_T01	RegFinal	595135.4	4846520.0	2.4	0	67	8.8	A	47.9	0.0	1.7	4.8	0.3	0.0	0.0	0.0	0.0	0.0	21
BN11_T02	RegFinal	595054.0	4846430.2	2.4	0	70	12.5	A	48.7	0.0	2.1	5.2	0.3	0.0	0.0	0.0	0.0	0.0	26
BN11_T02	RegFinal	595044.5	4846420.1	2.4	0	70	10.0	A	49.9	0.0	2.5	10.0	0.4	0.0	0.0	0.0	0.0	0.0	17
A01_S38	Rooftop Unit	595133.9	4846446.7	13.7	0	88	0.0	A	50.1	0.0	-0.1	9.7	0.4	0.0	0.0	0.0	0.0	0.0	28
A01_S38	Rooftop Unit	595133.9	4846446.7	13.7	1	88	0.0	A	56.6	0.0	1.1	0.0	0.7	0.0	0.0	0.0	0.0	2.3	28
A01_S37	Rooftop Unit	595113.0	4846427.4	13.7	0	88	0.0	A	50.2	0.0	-0.2	9.6	0.4	0.0	0.0	0.0	0.0	0.0	28
A01_S59	Rooftop Unit	595200.8	4846519.7	13.7	0	88	0.0	A	53.6	0.0	0.7	3.7	0.5	0.0	0.0	0.0	0.0	0.0	30
A01_S39	Rooftop Unit	595150.3	4846386.2	13.7	0	88	0.0	A	54.3	0.0	-0.1	11.5	0.6	0.0	0.0	0.0	0.0	0.0	22
A01_S39	Rooftop Unit	595150.3	4846386.2	13.7	1	88	0.0	A	58.8	0.0	0.9	3.6	0.9	0.0	0.0	0.0	0.0	2.7	21
A01_S40	Rooftop Unit	595176.6	4846407.9	13.7	0	88	0.0	A	54.4	0.0	-0.1	11.5	0.6	0.0	0.0	0.0	0.0	0.0	22
A01_S40	Rooftop Unit	595176.6	4846407.9	13.7	1	88	0.0	A	57.9	0.0	0.6	0.0	0.8	0.0	0.0	0.0	0.0	2.5	26
A01_S55	Rooftop Unit	595236.6	4846477.7	13.7	0	88	0.0	A	55.7	0.0	0.1	4.0	0.7	0.0	0.0	0.0	0.0	0.0	28
A01_S60	Rooftop Unit	595239.7	4846554.7	13.7	0	88	0.0	A	56.1	0.0	1.1	6.1	0.7	0.0	0.0	0.0	0.0	0.0	24
A01_S42	Rooftop Unit	595207.0	4846374.8	13.7	0	88	0.0	A	56.7	0.0	-0.3	11.9	0.7	0.0	0.0	0.0	0.0	0.0	19
A01_S42	Rooftop Unit	595207.0	4846374.8	13.7	1	88	0.0	A	59.1	0.0	0.2	3.9	1.0	0.0	0.0	0.0	0.0	2.8	21
A01_S41	Rooftop Unit	595185.6	4846354.8	13.7	0	88	0.0	A	56.7	0.0	-0.2	11.8	0.7	0.0	0.0	0.0	0.0	0.0	19
A01_S41	Rooftop Unit	595185.6	4846354.8	13.7	1	88	0.0	A	59.7	0.0	0.4	4.2	1.0	0.0	0.0	0.0	0.0	2.9	20
A01_S56	Rooftop Unit	595279.2	4846511.6	13.7	0	88	0.0	A	57.5	0.0	0.4	5.5	0.8	0.0	0.0	0.0	0.0	0.0	24
A01_S57	Rooftop Unit	595279.8	4846439.0	13.7	0	88	0.0	A	58.0	0.0	-0.2	4.2	0.9	0.0	0.0	0.0	0.0	0.0	25
A01_S58	Rooftop Unit	595315.6	4846474.3	13.7	0	88	0.0	A	59.0	0.0	0.2	4.8	0.9	0.0	0.0	0.0	0.0	0.0	23
A01_S44	Rooftop Unit	595273.6	4846304.0	13.7	0	88	0.0	A	60.2	0.0	-0.3	11.6	1.1	0.0	0.0	0.0	0.0	0.0	16
A01_S44	Rooftop Unit	595273.6	4846304.0	13.7	1	88	0.0	A	61.5	0.0	0.1	4.0	1.2	0.0	0.0	0.0	0.0	2.8	19
A01_S43	Rooftop Unit	595255.1	4846286.3	13.7	0	88	0.0	A	60.2	0.0	-0.2	11.5	1.1	0.0	0.0	0.0	0.0	0.0	16

Receiver: R01g
 Project: 12505 Heart Lake Road NIS
 Project Number: 22169

Time Period	Total (dBA)
Day	45

Receiver Name	Receiver ID	X	Y	Z
R01g	R01g	595067.09 m	4846505.63 m	1.50 m

Source ID	Source Name	X	Y	Z	Ref.	Lw	L/A	Freq	Adiv	K0	Agr	Abar	Aatm	Afol	Ahous	Cmet	Dc	RL	Lr
A01_S43	Rooftop Unit	595255.1	4846286.3	13.7	1	88	0.0	A	61.8	0.0	-0.1	4.6	1.2	0.0	0.0	0.0	0.0	2.9	18
A01_S49	Rooftop Unit	595343.1	4846378.2	13.7	0	88	0.0	A	60.7	0.0	-0.2	11.0	1.1	0.0	0.0	0.0	0.0	0.0	16
A01_S50	Rooftop Unit	595379.5	4846413.2	13.7	0	88	0.0	A	61.3	0.0	-0.1	7.1	1.2	0.0	0.0	0.0	0.0	0.0	19
A01_S45	Rooftop Unit	595292.7	4846247.1	13.7	1	88	0.0	A	62.9	0.0	0.1	4.5	1.4	0.0	0.0	0.0	0.0	2.9	16
A01_S46	Rooftop Unit	595316.8	4846264.5	13.7	1	88	0.0	A	62.7	0.0	-0.1	4.1	1.4	0.0	0.0	0.0	0.0	2.8	17
A01_S54	Rooftop Unit	595420.1	4846372.3	13.7	0	88	0.0	A	62.5	0.0	-0.1	6.4	1.3	0.0	0.0	0.0	0.0	0.0	18
A01_S47	Rooftop Unit	595327.7	4846208.7	13.7	1	88	0.0	A	63.9	0.0	-0.2	4.7	1.5	0.0	0.0	0.0	0.0	2.9	15
A01_S67	Rooftop Unit	595409.0	4846722.1	13.7	0	88	0.0	A	63.1	0.0	1.3	0.0	1.4	0.0	0.0	0.0	0.0	0.0	22
A01_S68	Rooftop Unit	595439.3	4846686.5	13.7	0	88	0.0	A	63.3	0.0	1.2	4.0	1.4	0.0	0.0	0.0	0.0	0.0	18
A01_S69	Rooftop Unit	595448.6	4846759.9	13.7	0	88	0.0	A	64.2	0.0	1.2	3.3	1.6	0.0	0.0	0.0	0.0	0.0	18
A01_S65	Rooftop Unit	595518.9	4846620.2	13.7	0	88	0.0	A	64.4	0.0	1.0	5.2	1.6	0.0	0.0	0.0	0.0	0.0	16
A01_S70	Rooftop Unit	595482.9	4846720.3	13.7	0	88	0.0	A	64.4	0.0	1.1	3.8	1.6	0.0	0.0	0.0	0.0	0.0	17
A01_S66	Rooftop Unit	595556.2	4846582.9	13.7	0	88	0.0	A	64.9	0.0	0.7	5.0	1.7	0.0	0.0	0.0	0.0	0.0	16
A01_S71	Rooftop Unit	595492.2	4846795.0	13.7	0	88	0.0	A	65.2	0.0	1.1	3.4	1.7	0.0	0.0	0.0	0.0	0.0	17
A01_S61	Rooftop Unit	595559.8	4846659.4	13.7	0	88	0.0	A	65.3	0.0	0.8	5.1	1.7	0.0	0.0	0.0	0.0	0.0	15
A01_S72	Rooftop Unit	595522.0	4846763.0	13.7	0	88	0.0	A	65.4	0.0	0.9	3.6	1.8	0.0	0.0	0.0	0.0	0.0	17
A01_S62	Rooftop Unit	595593.6	4846620.2	13.7	0	88	0.0	A	65.6	0.0	0.6	4.9	1.8	0.0	0.0	0.0	0.0	0.0	15
A01_S08	Rooftop Unit Office	595090.6	4846445.2	13.7	0	86	0.0	A	47.4	0.0	-0.6	0.0	0.7	0.0	0.0	0.0	0.0	0.0	39
A01_S07	Rooftop Unit Office	595085.5	4846440.0	13.7	0	86	0.0	A	47.8	0.0	-0.6	0.0	0.7	0.0	0.0	0.0	0.0	0.0	38
A01_S09	Rooftop Unit Office	595092.5	4846439.0	13.7	0	86	0.0	A	48.2	0.0	-0.7	6.4	0.7	0.0	0.0	0.0	0.0	0.0	31
A01_S13	Rooftop Unit Office	595215.8	4846584.7	13.7	0	86	0.0	A	55.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	29
A01_S15	Rooftop Unit Office	595225.3	4846583.3	13.7	0	86	0.0	A	55.9	0.0	-0.1	4.5	1.5	0.0	0.0	0.0	0.0	0.0	24
A01_S14	Rooftop Unit Office	595224.8	4846591.4	13.7	0	86	0.0	A	56.1	0.0	0.0	1.7	1.5	0.0	0.0	0.0	0.0	0.0	27
A01_S11	Rooftop Unit Office	595200.7	4846335.4	13.7	1	86	0.0	A	60.3	0.0	-0.8	5.3	2.2	0.0	0.0	0.0	0.0	2.1	17
A01_S10	Rooftop Unit Office	595195.1	4846327.0	13.7	1	86	0.0	A	60.6	0.0	-0.8	5.8	2.3	0.0	0.0	0.0	0.0	2.1	16
A01_S12	Rooftop Unit Office	595203.5	4846326.7	13.7	1	86	0.0	A	60.6	0.0	-0.8	5.5	2.3	0.0	0.0	0.0	0.0	2.1	16
A01_S05	Rooftop Unit Office	595229.3	4846302.9	13.7	1	86	0.0	A	61.3	0.0	-0.9	5.4	2.4	0.0	0.0	0.0	0.0	2.1	16
A01_S04	Rooftop Unit Office	595224.4	4846297.5	13.7	1	86	0.0	A	61.4	0.0	-0.9	5.7	2.5	0.0	0.0	0.0	0.0	2.1	15
A01_S06	Rooftop Unit Office	595230.9	4846295.5	13.7	1	86	0.0	A	61.5	0.0	-0.9	5.6	2.5	0.0	0.0	0.0	0.0	2.1	15
A01_S16	Rooftop Unit Office	595333.5	4846472.8	13.7	0	86	0.0	A	59.6	0.0	-0.9	6.1	2.1	0.0	0.0	0.0	0.0	0.0	19
A01_S17	Rooftop Unit Office	595339.0	4846480.2	13.7	0	86	0.0	A	59.7	0.0	-0.9	6.3	2.1	0.0	0.0	0.0	0.0	0.0	19
A01_S18	Rooftop Unit Office	595344.2	4846469.6	13.7	0	86	0.0	A	59.9	0.0	-0.9	6.0	2.2	0.0	0.0	0.0	0.0	0.0	19
A01_S19	Rooftop Unit Office	595365.1	4846438.5	13.7	0	86	0.0	A	60.7	0.0	-1.0	5.3	2.3	0.0	0.0	0.0	0.0	0.0	19
A01_S20	Rooftop Unit Office	595372.7	4846446.0	13.7	0	86	0.0	A	60.9	0.0	-1.0	5.5	2.3	0.0	0.0	0.0	0.0	0.0	18
A01_S21	Rooftop Unit Office	595374.1	4846436.8	13.7	0	86	0.0	A	61.0	0.0	-1.1	5.3	2.4	0.0	0.0	0.0	0.0	0.0	19
A01_S25	Rooftop Unit Office	595370.9	4846713.7	13.7	0	86	0.0	A	62.3	0.0	-0.1	0.0	2.7	0.0	0.0	0.0	0.0	0.0	21
A01_S27	Rooftop Unit Office	595382.9	4846709.2	13.7	0	86	0.0	A	62.5	0.0	-0.1	0.0	2.7	0.0	0.0	0.0	0.0	0.0	21
A01_S26	Rooftop Unit Office	595381.2	4846723.9	13.7	0	86	0.0	A	62.7	0.0	-0.1	0.0	2.7	0.0	0.0	0.0	0.0	0.0	21

End of Report
