



November 10, 2025

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Attention: Catherine Huntley

**Re: Noise Impact Study of the Proposed Development**  
91-93 Westmount Road, Guelph, Ontario  
Pinchin File: 359595(REV1)

## 1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by Wellington Hall Academy (Client) to prepare a noise impact study of its proposed development (Development) at 91-93 Westmount Road, Guelph, Ontario. This report has been prepared to evaluate the noise impacts from stationary/traffic sources on the Development and the Development on nearby receptors.

The proposed Development, located at 91-93 Westmount Road, Guelph, Ontario includes the conversion of the existing building on the subject lands for the use of a private school facility. Figure 1, Appendix B, shows the locations of the proposed Development, nearby roads, businesses (stationary sources), onsite and external noise sensitive receptors. A site plan is shown in Figure 2, Appendix B.

## 2.0 NOISE CRITERIA

In this study, guidelines from the City of Guelph [1] and Ministry of Environment, Conservation and Parks (MECP) Publication NPC-300 [2] were used in the preparation of the report.

The applicable noise criteria for this proposed development are described as follows:

### 2.1 Outdoor Noise Criteria

The daytime noise criterion for outdoor living areas (OLAs) is 55 dBA for road and rail noise sources. Where it is not technically, economically, or administratively feasible to meet the 55 dBA limit, up to 60 dBA is permissible with warning clauses. Where the daytime sound level is greater than 60 dBA, control measures are required to reduce the sound level to 60 dBA or less.

### 2.2 External Building Façade Criteria

Where the sound levels at the exterior of the building facades exceed 55 dBA at living/dining room windows during daytime hours, the unit must be provided with forced air heating with provision for central



air conditioning. Where the sound levels exceed by more than 10 dB (i.e. 65 dBA at living/dining room windows), central air conditioning must be incorporated into the building design prior to occupancy. Upgraded window glazing construction may be required and warning clauses are applicable as well. Since the guidelines does not provide specific sound level limits for schools, it is our opinion that the daytime sound level limits for living/dining room are applicable to schools.

### **2.3 Noise Criteria for Stationary Sources**

The applicable MECP noise criteria at a point of reception (POR) are dictated by MECP Publication NPC-300. It was our opinion the area was deemed in a Class 2 area due to the proximity to the local roads and various institutional and commercial operations in the area. For stationary noise sources (i.e. rooftop HVACs and exhausts), NPC-300 states that the one-hour sound exposures ( $L_{eq}$ , 1 hour) from stationary noise sources in Class 2 areas shall not exceed:

- the higher of 50 dBA or background noise between 7:00 am and 7:00 pm;
- the higher of 50 dBA or background noise between 7:00 pm and 11:00 pm (45 dBA for outdoor PORs); and
- the higher of 45 dBA or background noise between 11:00 pm and 7:00 am.

For the assessment of the noise impact from stationary sources on the Development, the MECP's exclusionary sound level limits of 50 dBA, 50 dBA, and 45 dBA have been used as the applicable guideline limits at the selected points of reception. The sound level limits for the testing of emergency generator are 5 dB higher than the applicable exclusionary sound level limits.

### **3.0 POINT OF RECEPTION DESCRIPTION**

To evaluate the noise impact on the Development from external stationary sources and road traffic, three (3) onsite points of reception (R1 to R3) were selected from the Development's most affected locations. Receptor R1 represents the classroom windows on the ground floor. Receptor R2 represents the library windows on the ground floor. Receptor R3 represents the office room window on the north façade.

To evaluate the noise impact from the Development on nearby receptors, two (2) points of reception (R4 and R4-OLA) were selected from the nearby residence. Receptor R4 represents a two-storey residential building located to the east of the Development on Division Street. Receptor R4-OLA represents the associated outdoor living area in the backyard.

The locations of the selected receptors are shown in Figure 1, Appendix B.



It should be noted that, per NPC-300, outdoor locations associated with a noise sensitive institutional purpose building are not considered to be points of reception. As such, the outdoor play area associated with the Development was not included in the assessment.

#### **4.0 NOISE IMPACT ASSESSMENT**

##### **4.1 Noise Impact from External Stationary Sources on the Development**

To evaluate the noise impact on the Development from external stationary sources, rooftop equipment information from nearby buildings were collected from a combination of site visit and review of aerial photos. The significant external stationary sources are included in Table 1 and include the following:

- One (1) emergency generator at 100 Westmount Road (sources GEN\_EX1, GEN\_IN1 and GEN\_IN2);
- Two (2) heat recovery units at 100 Westmount Road (sources HRU\_1 and HRU\_2);
- Two (2) condensers at 77 and 100 Westmount Road (sources CND1 and CND2);
- Two (2) cooling towers at 100 Westmount Road (sources CT1 and CT2);
- Three (3) air handling units at 100 Westmount Road (sources AHR\_1 to AHR\_3);
- Seven (7) exhausts at 100 Westmount Road (sources EX1 to EX7); and
- Nine (9) HVAC units at 77, 85, 97 and 100 Westmount Road (sources HVAC1 to HVAC9).

At the St. Joseph Health Center, there is a liquid gas receiving tank located to the south of the site. The facility receives liquid gas via a tanker truck from a third party on an as needed basis. The onsite personnel advised that liquid gas was generally delivered every few weeks and the total offloading time was approximately 30 minutes. Based on the liquid gas delivery frequency, it is our opinion that the tanker truck delivery would be deemed as an infrequent operation. The operation does not meet the requirements outlined in NPC-300 for “Infrequent operation of equipment”. As such, the tanker truck delivery operation was not included in this assessment.

The sound power level (PWL) estimates of the significant noise sources were based on Pinchin’s measurements during the site visit and typical manufacturer catalogue sound data. Details of manufacturer sound data are included in Appendix C.



An acoustic model was prepared using CadnaA (Version 2025 MR1). CadnaA calculates sound levels surrounding the Development according to ISO standard 9613-2 [3], “Acoustics – Attenuation of Sound during Propagation Outdoors.” The ISO calculation method, considered conservative, accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation, and acoustical shielding. Calculation parameters were set in accordance with the ISO standard, and detailed protocols can be provided upon request.

The following parameters were used in the acoustic model:

- Ground absorption was set to 0.0 for reflective surfaces (e.g. roads and paved surfaces);
- 1st order reflection was taken into account;
- Temperature of 10 °C and relative humidity of 70%;
- Barrier coefficients: C1: 3.0; C2: 20.0; C3: 0.0;
- All sources were spectral unless otherwise specified; and
- All buildings and structures had a reflection loss of one (1) dB.

In order to determine the largest excessive level, the worst case one-hour equivalent sound level ( $L_{eq, 1hr}$ ) has been predicted based on the following conditions that all equipment was assumed operating continuously for one (1) hour unless stated otherwise.

The following table summarizes the modelled equipment operating schedule at the facility:

<b>Equipment</b>	<b>Daytime Operation</b>	<b>Evening Operation</b>	<b>Nighttime Operation</b>
Emergency Equipment Testing (GEN1_##)	60 min/hr *	No Operation	No Operation
All Other Equipment	60 min/hr	60 min/hr	60 min/hr

\* the testing schedule was confirmed by the facility personnel.

The predicted contributions of each source at the external noise sensitive receptors are summarized in Table 2. Tables 3 and 4 summarize the compliance status of the Development at each receptor location. Noise impact contour maps are presented in Figures 3 and 4, Appendix B. Appendix F includes a sample output at onsite receptor R1.

#### **4.2 Noise Impact from Development on External Receptors**

Pinchin was advised by the Client that the significant stationary sources associated with the Development include the following:

- One (1) natural gas generator (source NG); and
- Four (4) air conditioners (sources C.1 to C.4).



Manufacturer sound data were used for the above equipment. Details of manufacturer sound data are included in Appendix D.

The Development will have two (2) make-up air units (MUA1 and MUA2) located in the basement. The intake louvers are located on the west façade, facing Westmount Road. In addition, insulated dampers will be installed between the units and louvers. Considering the insulated ductwork and shielding from the critical receptor (R4/R4-OLA), the potential noise impact from the units was deemed acoustically insignificant.

CadnaA was used to predict the noise impact from the Development on external receptors. The modeling protocol was similar to the modelling of the external sources on the Development.

The following table summarizes the modelled equipment operating schedule at the facility:

Equipment	Daytime Operation	Evening Operation	Nighttime Operation
Emergency Equipment Testing (NG)	20 min/hr **	No Operation	No Operation
All Other Equipment	60 min/hr	60 min/hr	60 min/hr

\*\* the testing/exercising time was taken from the manufacturer catalogue for similar models.

Tables 5 and 6 summarize the compliance status of the Development at each external receptor location. Noise impact contour maps are presented in Figures 5 and 6, Appendix B. Appendix F includes a sample output at external receptor R4.

### 4.3 Noise Impact from Road Traffic

A review of aerial photos shows that there is one local road in close proximity to the Development. Westmount Road, a collector road, is located to the west of the site.

The Annual Average Daily Traffic (AADT) volume was provided by the City of Guelph in July 2025. The provided traffic data were projected to year 2036 using an annual growth rate of 1.5%, as advised by the City of Guelph. Commercial vehicle percentages were also advised by the City of Guelph. A copy of the traffic data request email is included in Appendix D.

Traffic noise impact was predicted using STAMSON. Details of traffic data and STAMSON calculations are included in Appendix D.

The traffic noise impact prediction results are provided in Table 7, Appendix A.

In summary, the predicted traffic noise impacts range from 51 dBA to 56 dBA at selected onsite receptors. The predicted levels indicate that the building should be designed with a provision for the installation of central air conditioning in the future, at the occupant’s discretion. Warning clause Type C is



also recommended within any Agreement of Purchase of Sale or Lease Agreement for the proposed school use. Details of the warning clause are included in Appendix E.

As stated in Section 4.2, the Development will include four (4) air conditioning systems serving the building. As such, the above ventilation requirement has been exceeded.

The prediction results indicate that the construction of the existing building components (i.e. windows and walls) meeting the Ontario Building Code (OBC) requirements would be sufficient to provide the required sound attenuation.

It was confirmed by the Client's architect that the majority of the existing wall (over 95%) was constructed out of brick veneer. It is anticipated that the brick veneer wall would provide a Sound Transmission Class (STC) rating of 54. This rating would exceed the OBC requirement of STC 38 for exterior walls.

It was also confirmed by the Client that the windows/doors were constructed out of double glazing. It is anticipated that the double-glazing windows/doors would provide an STC rating that meets or exceeds the OBC requirement of STC 28-30 for windows.

## **5.0 CONCLUSIONS**

A noise impact study of the proposed Development was completed by modelling the noise impacts from external stationary sources on the Development, the Development on external receptors, and road traffic on the Development.

The predicted noise impacts from external stationary sources on the Development meet NPC-300 noise criteria. Noise control measures are not required for external stationary sources.

The predicted noise impacts from the Development on external receptors also meet NPC-300 noise criteria. Noise control measures are not required for the Development.

The assessment shows that the traffic noise impact on the Development meets the NPC-300 noise criteria, with provision for the installation of central air conditioning in the future, at the occupant's discretion. It is recommended that, warning clause Type C be included in any Agreement of Purchase of Sale or Lease Agreement for the proposed school use. Details of the warning clause are included in Appendix E.

## **6.0 TERMS AND LIMITATIONS**

This work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project.

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of



reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

## 7.0 CLOSURE

Should you have any questions or concerns regarding the contents of this study, please contact the Weidong Li at 647.287.1677 or [wli@pinchin.com](mailto:wli@pinchin.com).

Sincerely,

**Pinchin Ltd.**

Prepared by:

Reviewed by:

Weidong Li, PhD., P.Eng.  
Senior Project Engineer

Aidan Maher, P.Eng.  
Senior Project Manager





## 8.0 REFERENCES

1. City of Guelph, Guelph Noise Control Guidelines, Version 1.0, November 2018.
2. Ministry of the Environment Publication NPC-300, "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning", August 2013.
3. ISO 9613-2: 1996, Acoustics –Attenuation of Sound During Propagation outdoors. Part 2 – General Method of Calculation.
4. Ministry of the Environment's STAMSON/STEAM Computer Programme, (Version 5.04),

\\pinchin.com\Miss\Job\359000s\0359595.000 WellingtonHall,91-93Westmount,ERC,NOISE\Deliverables\0359595.000 Noise Impact Study 91-93 Westmount Rd, Guelph WellingtonHall Nov 10, 2025 (Rev 1).docx

Template: Master Noise Impact Study Letter, ERC, March 5, 2020

**APPENDIX A**  
**Tables**  
**(8 Pages)**



Table 2: Point of Reception Noise Impact Table, Development Sources

Source ID <sup>[1]</sup>	Source Description	Point of Reception R1, 3.0 m <sup>[2]</sup>		Point of Reception R2, 3.0 m <sup>[2]</sup>	
		Distance (m)	Daytime Sound Level at POR <sup>[3]</sup>	Distance (m)	Daytime Sound Level at POR <sup>[3]</sup>
AHR_1	Air Handling Unit - 100 Westmount	213	27	198	30
AHR_2	Air Handling Unit - 100 Westmount	222	23	207	24
AHR_3	Air Handling Unit - 100 Westmount	204	24	189	26
C.1	Condenser - New , Development	18	-	30	-
C.2	Condenser - New , Development	9	-	25	-
C.3	Condenser - Existing , Development	17	-	30	-
C.4	Condenser - Existing , Development	16	-	29	-
CND1	Condenser - 77 Westmount	112	30	133	25
CND2	Condensers - 100 Westmount	155	14	150	14
CT1	Cooling Towers - 100 Westmount	190	26	182	27
CT2	Cooling Towers - 100 Westmount	192	27	183	27
EX1	Kitchen Exhaust - 100 Westmount	210	23	193	24
EX2	General Exhaust - 100 Westmount	217	19	201	20
EX3	General Exhaust - 100 Westmount	215	20	199	20
EX4	General Exhaust - 100 Westmount	215	20	199	20
EX5	General Exhaust - 100 Westmount	186	22	176	19
EX6	General Exhaust - 100 Westmount	142	26	135	26
EX7	General Exhaust - 100 Westmount	178	24	164	25
GEN_EX1	Generator Air Exhaust - 100 Westmount	124	45	129	49
GEN_IN1	Generator Air Intake - 100 Westmount	127	50	132	41
GEN_IN2	Generator Air Intake - 100 Westmount	127	50	133	42
HRU_1	Heat Recovery Unit - 100 Westmount	251	30	236	30
HRU_2	Heat Recovery Unit - 100 Westmount	224	16	206	17
HVAC1	HVAC Unit - 77 Westmount	92	27	113	18
HVAC2	HVAC Unit - 77 Westmount	93	26	114	17
HVAC3	HVAC Unit - 77 Westmount	87	26	108	16
HVAC4	HVAC Unit - 77 Westmount	79	26	100	16
HVAC5	HVAC Unit - 85 Westmount	32	26	49	25
HVAC6	HVAC Unit - 100 Westmount	186	26	174	28
HVAC7	HVAC Unit - 100 Westmount	185	25	173	28
HVAC8	HVAC Unit - 97 Westmount	45	5	25	9
HVAC9	HVAC Unit - 97 Westmount	46	5	26	9
NG	Natural Gas Generator , Development	12	-	27	-

**Notes:**

1. Wherever possible, the Source ID is identical with that used in the ESDM report.
  2. Point of Reception (POR) height is 4.5 m unless otherwise stated.
  3. Sound Level Unit
- A-Weighted 1-hour equivalent sound level ( $L_{eq}(1-hr)$ ) in dBA for continuous sources.

Table 2: Point of Reception Noise Impact Table, External Sources

Source ID <sup>[1]</sup>	Source Description	Point of Reception R3, 3.0 m <sup>[2]</sup>		Point of Reception R4 <sup>[2]</sup>		Point of Reception R4-OLA, 1.5 m <sup>[2]</sup>	
		Distance (m)	Daytime Sound Level at POR <sup>[3]</sup>	Distance (m)	Daytime Sound Level at POR <sup>[3]</sup>	Distance (m)	Daytime Sound Level at POR <sup>[3]</sup>
AHR_1	Air Handling Unit - 100 Westmount	207	23	256	-	253	-
AHR_2	Air Handling Unit - 100 Westmount	215	24	264	-	262	-
AHR_3	Air Handling Unit - 100 Westmount	197	26	246	-	244	-
C.1	Condenser - New , Development	29	-	28	33	25	34
C.2	Condenser - New , Development	29	-	36	17	34	26
C.3	Condenser - Existing , Development	29	-	29	30	26	31
C.4	Condenser - Existing , Development	29	-	29	36	27	38
CND1	Condenser - 77 Westmount	136	27	91	-	96	-
CND2	Condensers - 100 Westmount	163	13	199	-	198	-
CT1	Cooling Towers - 100 Westmount	194	26	234	-	232	-
CT2	Cooling Towers - 100 Westmount	196	26	236	-	234	-
EX1	Kitchen Exhaust - 100 Westmount	201	17	251	-	248	-
EX2	General Exhaust - 100 Westmount	209	15	259	-	256	-
EX3	General Exhaust - 100 Westmount	207	17	256	-	253	-
EX4	General Exhaust - 100 Westmount	207	15	257	-	253	-
EX5	General Exhaust - 100 Westmount	187	19	230	-	228	-
EX6	General Exhaust - 100 Westmount	148	25	186	-	184	-
EX7	General Exhaust - 100 Westmount	174	24	221	-	218	-
GEN_EX1	Generator Air Exhaust - 100 Westmount	144	47	162	-	162	-
GEN_IN1	Generator Air Intake - 100 Westmount	147	50	165	-	165	-
GEN_IN2	Generator Air Intake - 100 Westmount	148	38	164	-	164	-
HRU_1	Heat Recovery Unit - 100 Westmount	245	32	294	-	291	-
HRU_2	Heat Recovery Unit - 100 Westmount	212	13	263	-	260	-
HVAC1	HVAC Unit - 77 Westmount	116	18	72	-	77	-
HVAC2	HVAC Unit - 77 Westmount	116	18	72	-	76	-
HVAC3	HVAC Unit - 77 Westmount	110	18	66	-	70	-
HVAC4	HVAC Unit - 77 Westmount	102	18	58	-	62	-
HVAC5	HVAC Unit - 85 Westmount	49	27	17	-	18	-
HVAC6	HVAC Unit - 100 Westmount	185	27	230	-	228	-
HVAC7	HVAC Unit - 100 Westmount	184	27	229	-	226	-
HVAC8	HVAC Unit - 97 Westmount	17	35	68	-	64	-
HVAC9	HVAC Unit - 97 Westmount	18	35	69	-	65	-
NG	Natural Gas Generator , Development	29	-	33	34	31	39

Notes:

1. Wherever possible, the Source ID is identical with that used in the ESDM report.
2. Point of Reception (POR) height is 4.5 m unless otherwise stated.
3. Sound Level Unit  
A-Weighted 1-hour equivalent sound level ( $L_{eq}$  (1-hr) in dBA for continuous sources.

**Table 3: Acoustic Assessment Summary Table - External Stationary Sources on the Development**

Point of Reception ID	Point of Reception Description	Time Period <sup>[1]</sup>	Total Level at POR ( $L_{eq}$ , 1-hr) <sup>[2]</sup>	Verified by Acoustic Audit (Yes/No)	Performance Limit ( $L_{eq}$ 1-hr) <sup>[3]</sup>	Compliance with Performance Limit (Yes/No)
R1	Classroom - 123	Daytime	39	No	50	Yes
		Evening	39	No	50	Yes
		Nighttime	39	No	45	Yes
R2	Library - 130	Daytime	39	No	50	Yes
		Evening	39	No	50	Yes
		Nighttime	39	No	45	Yes
R3	Admin. Office - 133	Daytime	41	No	50	Yes
		Evening	41	No	50	Yes
		Nighttime	41	No	45	Yes

Notes:

- [1] The predictable worst-case one (1) hour period was considered in the study.
- [2] Worst-case one hour equivalent sound level from all applicable sources operating in dBA.
- [3] MECP exclusionary sound level limits of one hour  $L_{eq}$  for Class 2 areas.

**Table 4: Acoustic Assessment Summary Table - External Generator on the Development**

<b>Point of Reception ID</b>	<b>Point of Reception Description</b>	<b>Time Period <sup>[1]</sup></b>	<b>Total Level at POR (L<sub>eq</sub>, 1-hr) <sup>[2]</sup></b>	<b>Verified by Acoustic Audit (Yes/No)</b>	<b>Performance Limit (L<sub>eq</sub> 1-hr) <sup>[3]</sup></b>	<b>Compliance with Performance Limit (Yes/No)</b>
R1	Classroom - 123	Daytime	54	No	55	Yes
R2	Library - 130	Daytime	50	No	55	Yes
R3	Admin. Office - 133	Daytime	52	No	55	Yes

Notes:

- [1] The predictable worst-case one (1) hour period was considered in the study.
- [2] Worst-case one hour equivalent sound level from all applicable sources operating in dBA.
- [3] MECP exclusionary sound level limits of one hour Leq for Class 2 areas, plus 5 dBA for generator testing.

**Table 5: Acoustic Assessment Summary Table - Development Stationary Sources on External Receptors**

<b>Point of Reception ID</b>	<b>Point of Reception Description</b>	<b>Time Period <sup>[1]</sup></b>	<b>Total Level at POR (L<sub>eq</sub>, 1-hr) <sup>[2]</sup></b>	<b>Verified by Acoustic Audit (Yes/No)</b>	<b>Performance Limit (L<sub>eq</sub> 1-hr) <sup>[3]</sup></b>	<b>Compliance with Performance Limit (Yes/No)</b>
R4	External Residence	Daytime	38	No	50	Yes
		Evening	38	No	50	Yes
		Nighttime	38	No	45	Yes
R4-OLA	External OLA	Daytime	40	No	50	Yes
		Evening	40	No	45	Yes

Notes:

- [1] The predictable worst-case one (1) hour period was considered in the study.
- [2] Worst-case one hour equivalent sound level from all applicable sources operating in dBA.
- [3] MECP exclusionary sound level limits of one hour Leq for Class 2 areas.

**Table 6: Acoustic Assessment Summary Table - Development Generator on External Receptor**

<b>Point of Reception ID</b>	<b>Point of Reception Description</b>	<b>Time Period <sup>[1]</sup></b>	<b>Total Level at POR (L<sub>eq</sub>, 1-hr) <sup>[2]</sup></b>	<b>Verified by Acoustic Audit (Yes/No)</b>	<b>Performance Limit (L<sub>eq</sub> 1-hr) <sup>[3]</sup></b>	<b>Compliance with Performance Limit (Yes/No)</b>
R4	External Residence	Daytime	34	No	55	Yes
R4-OLA	External OLA	Daytime	39	No	55	Yes

Notes:

- [1] The predictable worst-case one (1) hour period was considered in the study.
- [2] Worst-case one hour equivalent sound level from all applicable sources operating in dBA.
- [3] MECP exclusionary sound level limits of one hour Leq for Class 2 areas, plus 5 dBA for generator testing.

**Table 7: Road Traffic Noise Impact Predictions**

Point of Reception ID	Point of Reception Description	Predicted Road Traffic Noise Levels, (Leq, dBA) <sup>[1]</sup>		Ventilation Requirement [2]	Warning Clause [3]
		Daytime (16 hr)	Nighttime (8 hr)		
R1 / R2	Classroom - 123 / Library Windows on West Façade	56	n/a	Provision for AC	Type C

**Notes:**

- . Daytime hours are between 7:00 am and 11:00 pm and nighttime hours are between 11:00 pm and 7:00 am.
- 1. STAMSON predicted sound levels in dBA at the planes of windows.
- 2. The dwelling should be designed with a provision for the installation of central air conditioning.
- 3. See Appendix E.

**APPENDIX B**  
**Figures**  
**(6 Pages)**



**Figure 1 - Scaled Area Plan, Showing the Development and External Sources**



Drawn by: WNL

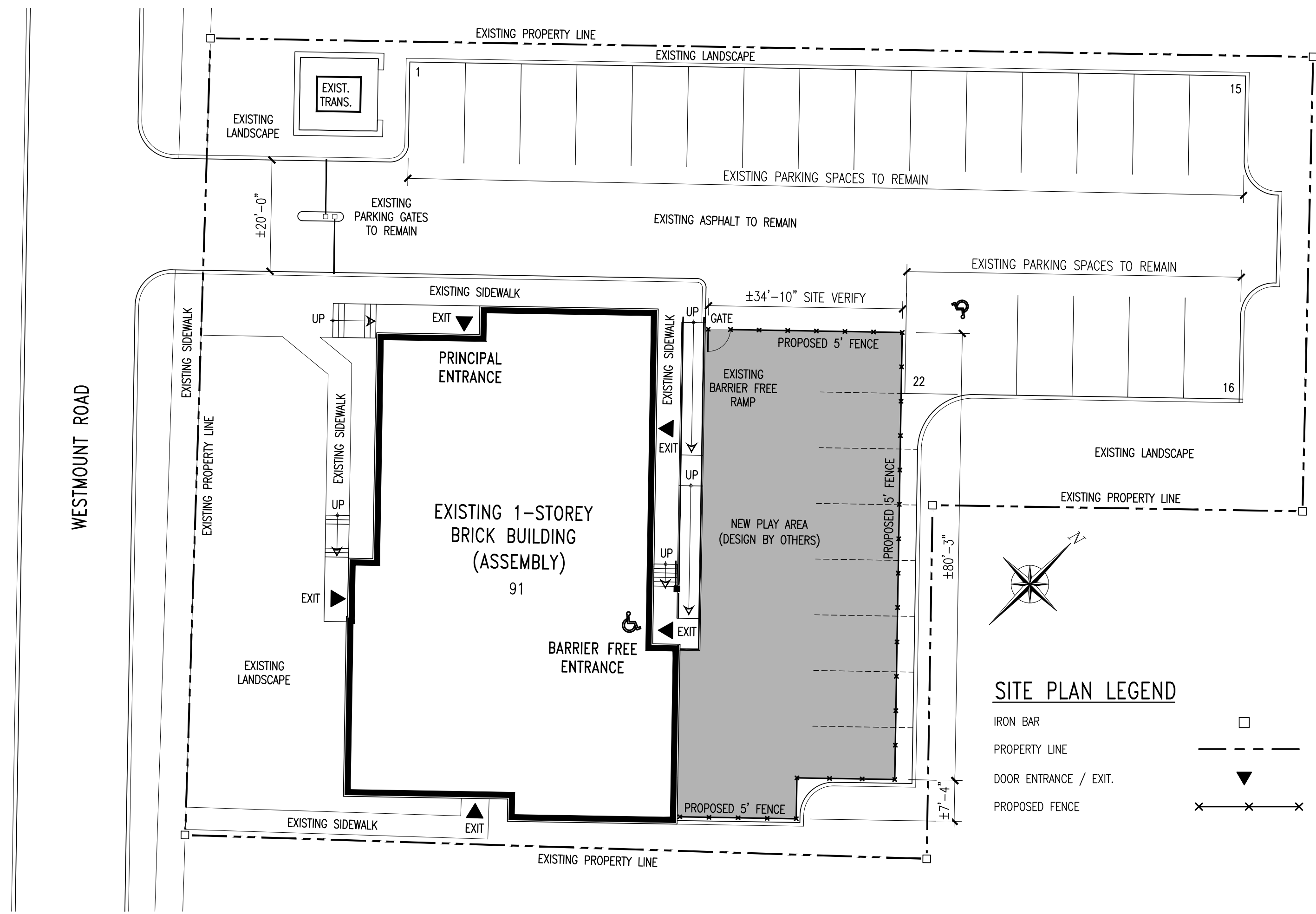
Scale: 1:2000

Date: August 13, 2025

Wellington Hall Academy, 91-93 Westmount Road, Guelph, Ontario

Pinchin Project: 359595



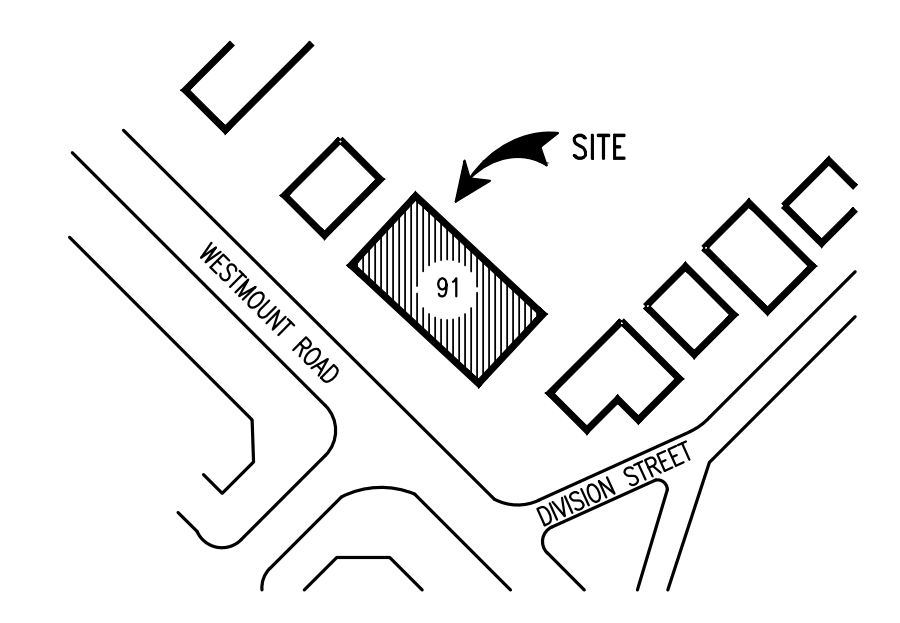


2 SITE PLAN  
A101 NTS

**GENERAL NOTES**

**EXISTING CONDITIONS:**  
DO NOT SCALE DRAWINGS.  
EXISTING PLANS SHOWN HERE ARE FOR REFERENCE PURPOSES ONLY. EXISTING AS-BUILT PLANS DATED JUNE TO 2024, WHICH WERE COMPLETED BY MEASUREX, DAVID THOMPSON ARCHITECT LTD. AND ORCHARD DESIGN STUDIO INC. ASSUME NO RESPONSIBILITY OR LIABILITY FOR INFORMATION OR DIMENSIONS SHOWN ON PLANS OUTSIDE OF THE DESIGNATED SCOPE OF WORK FOR THIS PROJECT.  
DIMENSIONS PROVIDED ARE APPROXIMATE AND SHALL BE SITE VERIFIED.  
CONTRACTOR(S) SHALL CHECK AND VERIFY ALL DIMENSIONS AND SPECIFICATIONS AND REPORT ANY DISCREPANCIES TO ARCHITECT BEFORE PROCEEDING WITH THE WORK.  
THE DRAWING AND INFORMATION CONTAINED HEREIN IS THE CONSULTANTS BEST JUDGEMENT OF THE INFORMATION AVAILABLE. ANY USE WHICH A THIRD PARTY MAKES OFF THE CONTRACT DOCUMENTS, OR ANY RELIANCE ON/OR DECISIONS MADE BASED ON THEM ARE THE SOLE RESPONSIBILITY OF SUCH THIRD PARTIES.  
REFER TO EXISTING BASE BUILDING DRAWING(S) FOR EXISTING WALL ASSEMBLIES AND FIRE SEPARATION INFORMATION.

**NEW CONSTRUCTION:**  
ALL WORK MUST COMPLY WITH 2024 ONTARIO BUILDING CODE AND AMENDMENTS.  
AS A CONDITION OF THE WORK, THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR AND ENSURE ALL AREAS DISTURBED WITHIN THE RENOVATED AREA ARE MADE GOOD SUCH THAT AFFECTED AREAS ARE RETURNED TO A STATE PRIOR TO CONSTRUCTION ACTIVITIES AND AS SUCH SHALL BE DEEMED AS PART OF THE WORK AND SHALL NOT CONSTITUTE ADDITIONAL COSTS. RESTORATION WORK SHALL MEET WITH THE APPROVAL OF THE OWNER.  
CONTRACTOR MUST PROVIDE ALL LABOUR, MATERIAL AND EQUIPMENT REQUIRED TO PERFORM THE WORK.  
ALL FURNITURE AND OFFICE EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY OWNER.  
ALL NEW AND EXISTING WALLS, CEILING, DOORS AND FRAMES THROUGHOUT RENOVATED AREA SHALL BE PRIMED/PAINED. COLOUR(S) SHALL BE AS DIRECTED BY OWNER OR INTERIOR DESIGNER. ALL SCRATCHES, DENTS, HOLES AND ANY OTHER ANOMALIES THROUGHOUT BUILDING RESULTING FROM THE WORK BEING PERFORMED, DURING DEMOLITION AND NEW CONSTRUCTION, SHALL BE PATCHED, REPAIRED, AND PAINTED. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF ANY AND ALL EXISTING WALL MOUNTED ITEMS IN SUITE TO FACILITATE FULL PAINT COVERAGE ON EXISTING WALLS.



SITE KEY MAP - 91 WESTMOUNT ROAD, GUELPH, ON.  
NTS

2024 Ontario Building Code Part 11 Data Matrix		Building Code Reference
11.00	Building Code Version: 0.Reg. 163/24 Last Amendment: 0.Reg. 447/24	
11.01	Project Type: <input checked="" type="checkbox"/> Renovation <input checked="" type="checkbox"/> Change of use <input type="checkbox"/> Addition <input type="checkbox"/> Addition and renovation Description: One (1) storey office building converted to private school	[A]1.1.2.
11.02	Major Occupancy Classification: Occupancy: Existing - 0 Proposed - A2 Use: Offices Private school	3.1.2.1.(1)
11.03	Superimposed Major Occupancies: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	3.2.2.7.
11.04	Building Area (m <sup>2</sup> ): Description: Existing New Total Level 1 453 0 453	[A]1.4.1.2.
11.05	Building Height: 1 Storeys above grade 1 Storeys below grade	[A]1.4.1.2. & 3.2.1.1.
11.06	Number of Streets/Firefighter Access: 1 Street	3.2.2.10. & 3.2.5.
11.07	Building Size: <input type="checkbox"/> Small <input checked="" type="checkbox"/> Medium (>400 m <sup>2</sup> ) <input type="checkbox"/> Large <input type="checkbox"/> > Large	T.11.2.1.1.8-N.
11.08	Existing Building Classification: Change in Major Occupancy: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Applicable Construction Index: 2 (non combustible, no floor/roof ratings) Hazard Index: Existing-3 (small D) & New-4 (medium A2 school) Importance Category: <input type="checkbox"/> Low <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Post-disaster	11.2.1.1. T 11.2.1.1A T 11.2.1.1J&C 4.2.1.(3). 5.2.2.1.(2)
11.09	Renovation Type: <input type="checkbox"/> Basic Renovation <input checked="" type="checkbox"/> Extensive Renovation	11.3.3.1. 11.3.3.2.
11.10	Occupant Load: Floor Level/Area Occupancy Type Based On Occupant Load Existing, Basement & Level 1 D Exist. Floor Plan 60 Existing, Basement & Level 1 A2 Design 65 % Increase 8.3%	3.1.17.
11.11	Plumbing Fixture Requirements: Ratio: M/F = 1/1 except as otherwise noted Floor Level/Area Occupant Load Fixtures Required Fixtures Provided Basement 29 2 3 Level 1 36 2 3	3.7.4.
11.12	Barrier-free Design: <input checked="" type="checkbox"/> Yes Explanation: Existing barrier free ramp to provide access to Level 1 and existing LULA to provide basement access. <input type="checkbox"/> No	11.3.3.2.(2)
11.13	Reduction in Performance Level: Structural: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes By increase in occupant load: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <15% By change of major occupancy: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Plumbing: Exist. municipal service <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Sewage-systems: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Extension of combustible construction: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	11.4.2.1. 11.4.2.2. 11.4.2.3. 11.4.2.4. 11.4.2.5. 11.4.2.6.
11.14	Compensating Construction: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Structural: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes P.Eng. to verify floor load capacity Increase in occupant load: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes N/A since OL increase <15% Change of major occupancy: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Increase CI from 2 to 4 (equal new HI) Upgrading: Floor over basement - 45min. FRR & Roof 0hr. FRR Plumbing Facilities - 3.7.4.3.(14)(A2): 2 WC per sex (maximum OL=60 males and 56 females) Existing: 6 Water Closets EWEVAC: provide emergency lighting - exit lighting and fire alarm N/R since OL <150 persons Plumbing: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Sewage systems: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Mech. P.Eng. to verify Extension of combustible construction: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Existing non-combustible	11.4.3.1. 11.4.3.2. 11.4.3.3. 11.4.3.4. 11.4.3.5. 11.4.3.6. 11.4.3.7. 11.2.1.1.-A 11.1.4.3.3.
11.06	Compliance Alternatives Proposed: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	11.5.1.

1 OBC PART 11 MATRIX  
A101 NTS



INTERIOR ALTERATIONS  
91 WESTMOUNT RD  
GUELPH - ONTARIO

NO.	DESCRIPTION	DATE
⚠	ISSUED FOR PERMIT	2025-07-11
--	ISSUED FOR REVIEW	2025-06-27
⚠	APPROVALS	2025-06-27
NO.	DESCRIPTION	DATE

PROJECT NO: 16071  
DRAWN BY: FL-bh-jed  
PROJECT START DATE: 2025-06-27

GENERAL NOTES,  
SITE PLAN &  
PART 11 MATRIX

**A101**

Figure 2 - Site Plan



**Figure 3 - Noise Impact Contour Map - External Stationary Sources**

Wellington Hall Academy, 91-93 Westmount Road, Guelph, Ontario

Pinchin Project: 359595

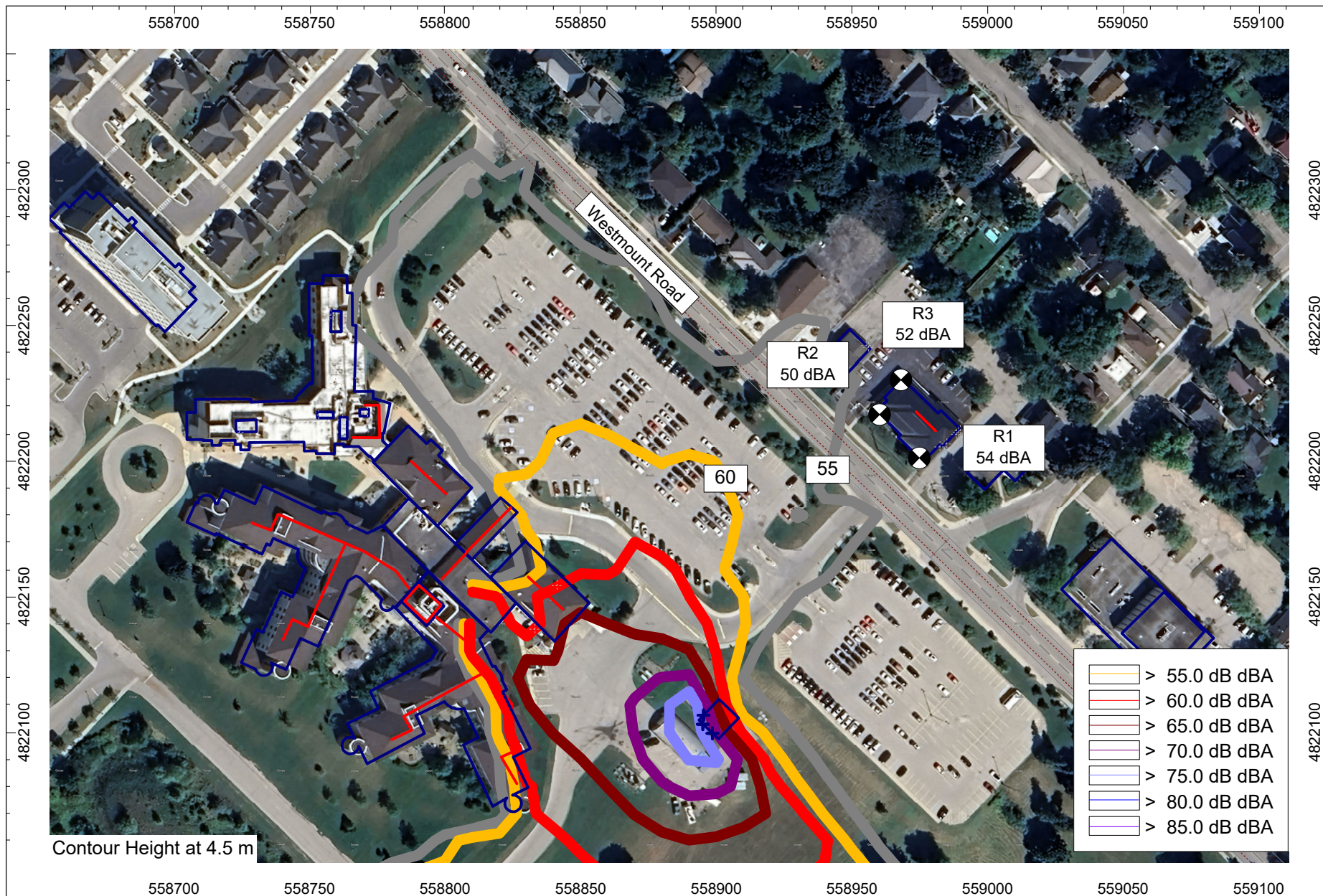


Drawn by: WNL

Scale: 1:2000

Date: August 13, 2025





**Figure 4 - Noise Impact Contour Map - External Generator**

Wellington Hall Academy, 91-93 Westmount Road, Guelph, Ontario

Pinchin Project: 359595

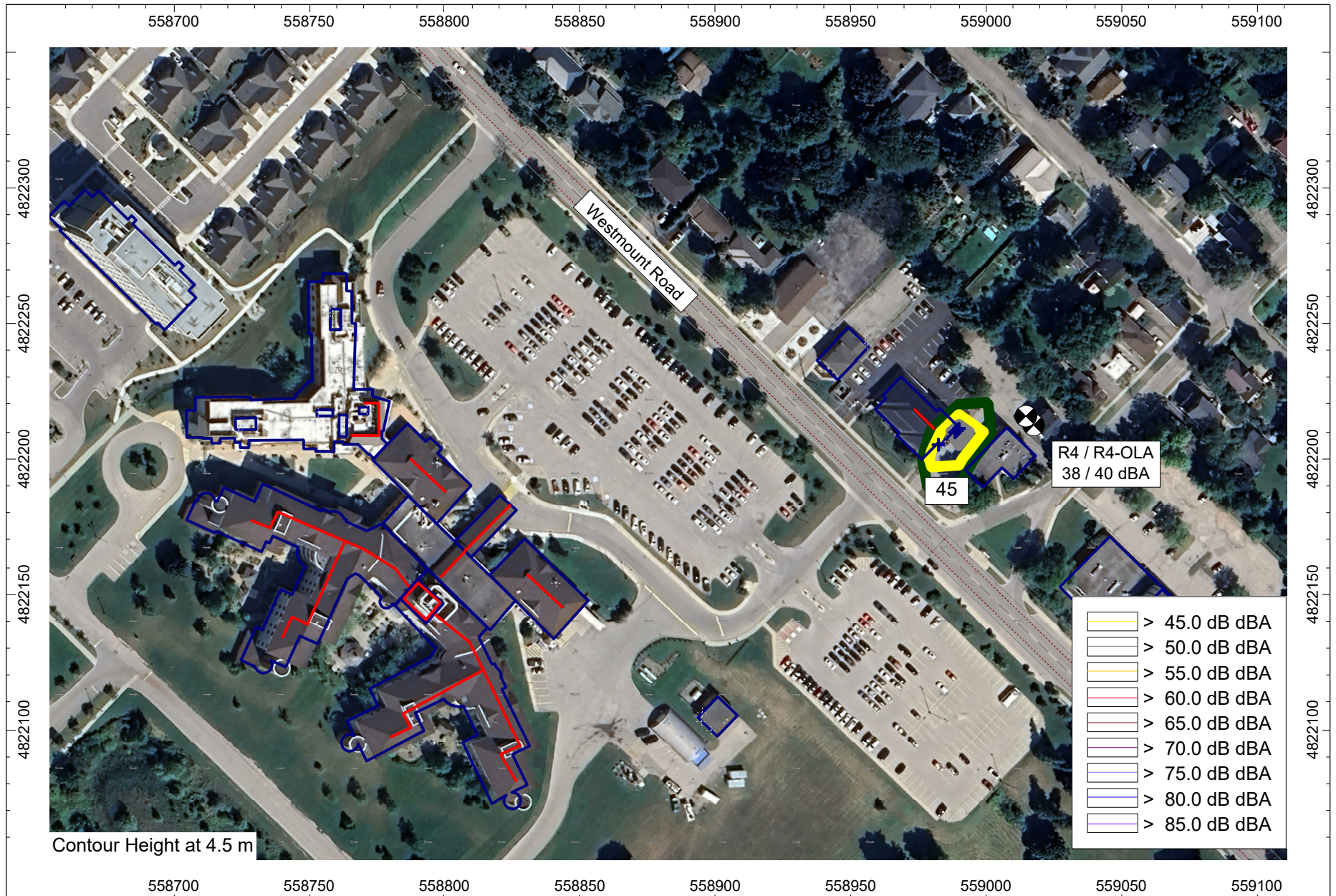


Drawn by: WNL

Scale: 1:2000

Date: August 13, 2025





**Figure 5 - Noise Impact Contour Map - Development Stationary Sources**

Wellington Hall Academy, 91-93 Westmount Road, Guelph, Ontario

Pinchin Project: 359595

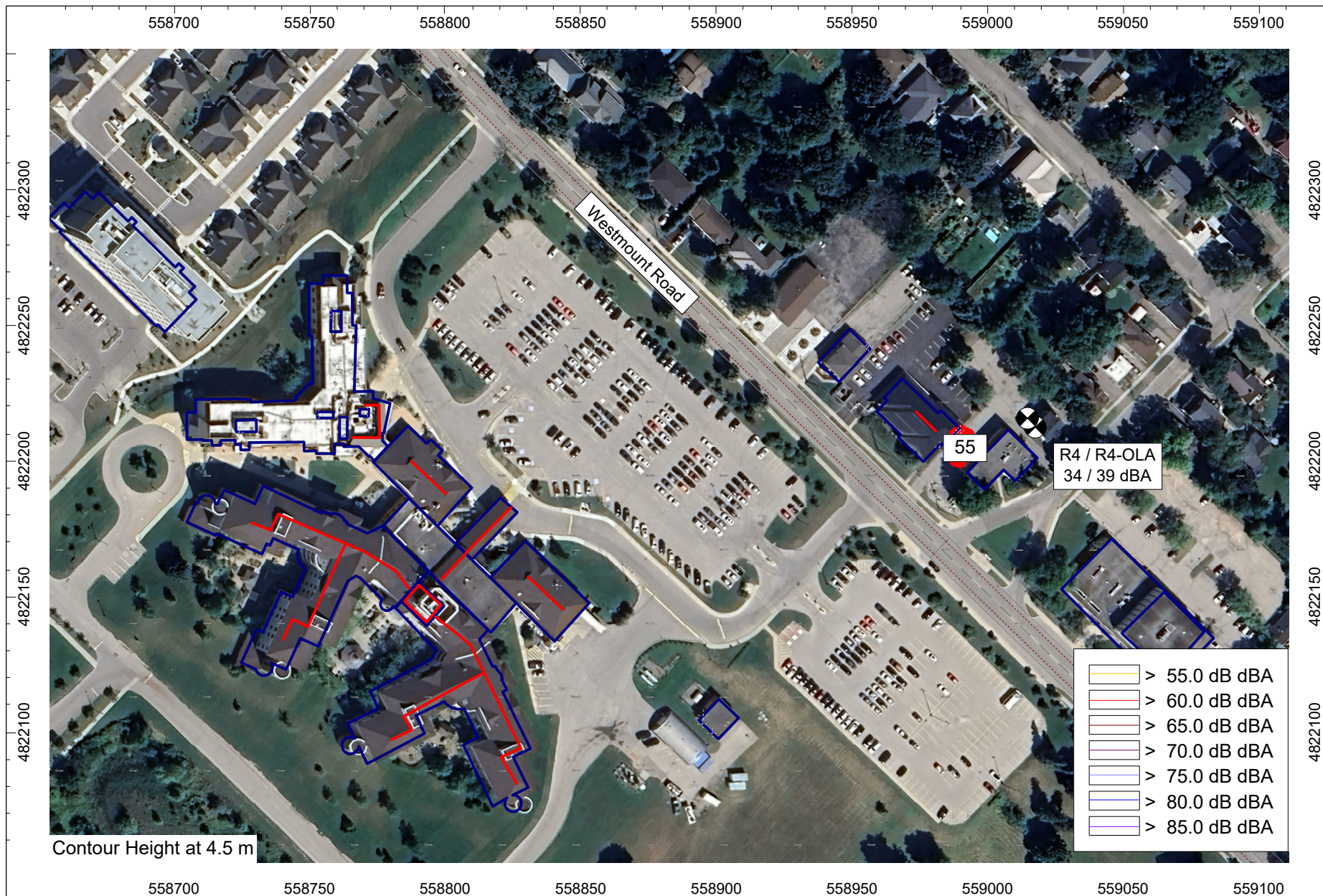


Drawn by: WNL

Scale: 1:2000

Date: August 13, 2025





**Figure 6 - Noise Impact Contour Map - Development Generator**

Wellington Hall Academy, 91-93 Westmount Road, Guelph, Ontario

Pinchin Project: 359595



Drawn by: WNL

Scale: 1:2000

Date: August 13, 2025



**APPENDIX C**  
**Manufacturer Sound Data**  
**(4 Pages)**

## OUTDOOR SOUND DATA

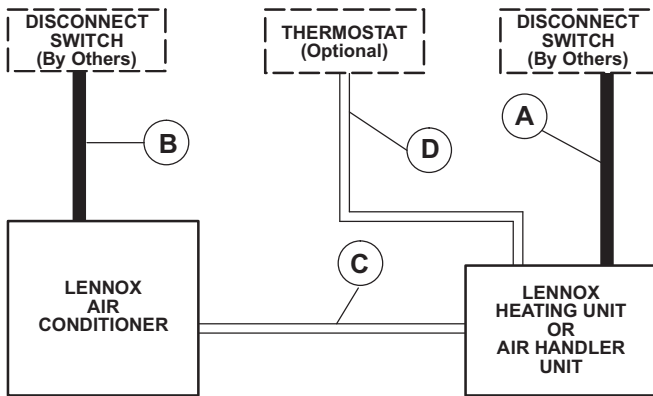
<sup>1</sup> Unit Model No.	Octave Band Linear Sound Power Levels dB, re 10 <sup>-12</sup> Watts Center Frequency - HZ							<sup>1</sup> Sound Rating Number (dB)
	125	250	500	1000	2000	4000	8000	
XC14-018	52.0	59.5	64.5	65.5	60.5	54.5	45.5	71
XC14-024	55.0	60.0	66.0	66.0	62.5	57.5	47.5	71
XC14-030	55.0	62.0	65.5	66.5	60.0	52.5	45.0	71
XC14-036 / XC14S036	53.0	61.0	64.5	65.0	59.5	53.5	48.5	70
XC14-041	56.5	62.0	68.0	68.5	63.5	56.5	49.5	73
XC14-042	58.5	64.0	68.5	68.5	63.5	56.5	50.5	73
XC14-047	59.5	62.5	67.5	66.0	63.0	57.5	51.5	73
XC14-048	56.5	62.0	68.0	68.5	63.5	56.5	49.5	73
XC14-060	59.5	62.5	67.5	66.0	63.0	57.5	51.5	73

C3

NOTE - the octave sound power data does not include tonal correction.

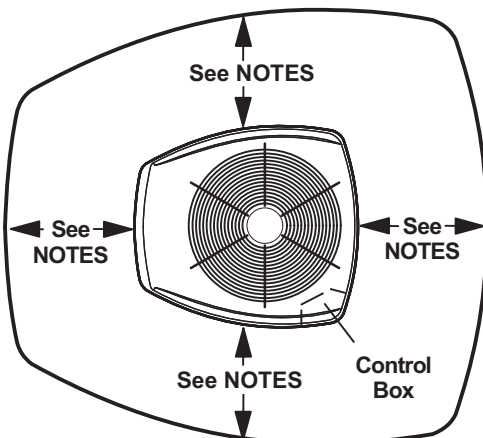
<sup>1</sup> Tested according to AHRI Standard 270-2008 test conditions.

## FIELD WIRING



- A - Two Wire Power (not furnished)
  - B - Two Power (not furnished). See Electrical Data
  - C - Four Wire Low Voltage (not furnished). 18 ga. minimum
  - D - Five Wire Low Voltage (not furnished). 18 ga. minimum
- All wiring must conform to NEC or CEC and local electrical codes.

## INSTALLATION CLEARANCES - INCHES (MM)



### NOTES:

Service clearance of 30 in. (762 mm) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 36 in. (914 mm)

Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

A clearance of 24 in. (610 mm) must be maintained between two units.

48 in. (1219 mm) clearance required on top of unit.

## APPLICATIONS AND ACCESSORIES

Refer to Price Manual for specific model numbers.

Standard Application Limits*		
Maximum Lineset Equivalent Length	80 Ft	
Outdoor Ambient Temperature Limits		
Cooling Operation	Maximum DB	115°F
	Minimum DB	55°F

\* For Low Ambient and/or Long Lineset Applications, please see the accessories listed below.

**Non-Standard Lineset Applications** - For installations with reduced diameter or long linesets, refer to the current version of the Piping Application Guide P/N 247077, available in the Application Bulletins section on [www.upgnet.com](http://www.upgnet.com).

**OD Unit Anti Short Cycle Kit (10 Pack) S1-2TD08700124BK:** A time delay that prevents rapid compressor restarting as a result of power interruption, limit switch operation, or thermostat resetting. Not required for HP models, or for AC models with factory electronic controls.

**Standard Low Ambient Control Kit S1-2LA06700424:** Allows the use of air conditioning at low outdoor ambient temperatures down to +20°F (-7°C). For use with all R-410A single stage AC & HP models.

**Advanced Low Ambient Control Kit S1-2LA04701024:** Contains the necessary components and controls to allow cooling operation down to -20°F (-29°C). For use with all R-410A single stage AC & HP models.

**Low Pressure Switch Kit S1-2PS06700524:** Provides field installed low pressure (loss of charge) protection. Not required for HP models, or for AC models with factory electronic controls.

**High Ambient Condenser Fan Motor S1-FHM\*\*\*\*HT:** Class F 70°C motor to allow cooling operation up to 160°F air entering the condenser. For use with all R-410A single stage AC & HP models containing R-410A refrigerant only.

**Outdoor Communicating Board Kit (S1-33102952310):** Electronic control upgrade for standard AC & HP units to provide compatibility with the Residential Touch Screen Communicating Control.

**Start Assist Kit S1-2SA067\*\*\*\*:** Provides increased compressor starting torque for areas with low supply voltage. Required for units with recip compressors when applied with indoor TXV, and for all units when applied with long linesets or low ambient kits. May be factory installed on select AC & HP units (see Physical & Electrical Table). See Price Pages or Source1 SmartSearch for the correct kit for each application.

**Compressor Crankcase Heater Kit (S1-025-\*\*\*\*-\*\*\*\*):** A wrap-around electrical resistance heater that warms the compressor sump, reducing the chance of liquid slugging on startup. Required on all long lineset and low ambient applications. See Price Pages or Source1 SmartSearch for the correct part for each application.

**Indoor Blower-Off Delay Kit S1-2FD06700224:** Provides a 1-minute blower-off delay at the end of the cooling cycle. May be required for retrofits with non-Johnson Controls Unitary Products indoor units. This feature is factory-provided on all JCUP indoor products.

**Support Feet S1-HPRKIT\*\*:** Kit of 5 support feet to raise unit above snow or landscaping. Available in heights of 3", 6" or 12".

**Anchor Bracket Kit S1-1HK0401:** Firmly anchors unit to pad or support structure. When properly installed, approved for ground-mounted or roof-mounted applications.

**Indoor TXV Kit S1-1TVM\*\*\*:** Thermal expansion valves precisely meter refrigerant for optimum performance over a wide range of conditions. See System Charge Table, Price Pages, or Source1 Smart Search for TXV part number for each AC & HP model.

**Wall Mount Kit (S1-ACB\*\*):** Includes two brackets to allow outdoor unit to be securely mounted to a vertical wall. Mounting hardware is field sourced according to the specific application.

**Winter Cover Kit S1-CCVRE\*\*\*:** Custom fit winter cover protects AC condensing unit from debris during the off-season. Must be removed prior to unit operation. See Price Pages or Source1 SmartSearch for the correct cover for each application.

**Cold Weather Charging Tent S1-CHGTENT01:** Provides warm environment to accurately service AC & HP systems in ambient conditions 55°F (13°C) or colder.

**Touch-up Paint S1-5130153\*\*\*\*:** Color matched aerosol paint for touching up unit chassis and panels. See Price Pages or Source1 SmartSearch for the correct color for each application.

**Compressor Sound Blanket S1-010-07xxx-000:** A field installed dense foam cover that provides 2dBA sound level reduction. See Price Pages or Source1 SmartSearch for the correct blanket for each application.

**Thermostat:** Compatible thermostat controls are available through accessory sourcing. For optimum performance, these outdoor units are fully compatible with our Coleman Hx™ Touchscreen Thermostats available through Source1. For more information, see the thermostat section of the Product Equipment Catalog.

## SOUND POWER RATINGS

Cooling	Octave Band Sound Power Level (db re. 1-pW)									
	Model Number	63	125	250	500	1000	2000	4000	8000	dBA
TC3B1821(H,S)	69.0	72.1	68.2	72.2	70.3	64.9	64.3	59.4	75.0	19.2
TC3B2421(H,S)	69.6	70.6	69.7	74.4	70.7	66.5	64.8	61.2	76.0	19.1
TC3B3021(H,S)	69.2	69.9	71.2	74.0	70.3	67.1	65.6	60.8	75.0	19.2
TC3B3621(H,S)	55.2	58.3	61.4	68.3	74.0	69.7	66.8	59.9	77.0	19.1
TC3B4221(H,S)	66.2	67.5	69.4	72.8	71.0	68.6	62.8	59.9	76.0	19.1
TC3B4821S	73.0	75.7	70.3	72.0	72.8	65.8	60.8	55.9	76.0	19.1
TC3B6021S	74.6	74.8	71.3	72.5	72.6	68.3	64.9	66.9	77.0	19.0

Rated in accordance with ARI Standard 270.

**A-WEIGHTED SOUND POWER (dBA)**

UNIT SIZE	STANDARD RATING	TYPICAL OCTAVE BAND SPECTRUM (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18	71	49.7	56.5	62.1	67.6	65.2	59.7	53.9
24	74	50.2	60.9	65.5	67.5	65.0	60.7	54.0
30	72	53.6	60.1	65.7	68.3	64.0	60.9	56.5
C.1, C.2 36	75	57.4	66.4	70.0	70.2	67.6	64.4	58.5
42	78	55.6	66.7	66.6	68.5	65.2	63.1	58.5
48	76	56.4	63.4	69.4	70.4	68.9	69.0	60.1
60	79	59.9	65.5	68.2	70.1	68.4	65.4	61.7

NOTE: Tested in compliance with AHRI 270–2008 (not listed with AHRI)

**A-WEIGHTED SOUND POWER (dBA) with SOUND SHIELD**

UNIT SIZE	STANDARD RATING	TYPICAL OCTAVE BAND SPECTRUM (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18	70	51.0	57.4	62.3	66.3	63.3	58.7	52.3
24	74	51.5	61.6	65.4	66.8	63.9	60.2	53.2
30	72	53.4	60.7	65.5	67.8	63.6	60.4	54.8
36	75	56.8	65.9	69.5	69.4	67.3	63.5	56.1
42	77	56.0	65.1	66.8	68.4	64.8	62.4	56.3
48	75	56.8	63.1	69.4	70.2	67.7	66.3	59.4
60	79	58.1	65.8	67.9	68.7	66.0	62.0	57.0

NOTE: Tested in compliance with AHRI 270–2008 (not listed with AHRI)

**CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)**

UNIT SIZE	required subcooling (Copper Coil) °F (°C)	required subcooling (Aluminum Coil) °F (°C)	INDOOOR
18	14 (7.8)	14 (7.8)	TXV*
24	10 (5.6)	10 (5.6)	
30	10 (5.6)	11 (6.1)	
36	11 (6.1)	10 (5.6)	
36 (3-ph)	14 (7.8)	N/A	
42	10 (5.6)	10 (5.6)	
48	13 (7.2)	10 (5.6)	
48 (3-ph)	15 (8.3)	N/A	
60	15 (8.3)	16 (8.9)	
60 (3-ph)	10 (5.6)	N/A	

\*TXV must be ordered separately when indoor coil is not equipped with a TXV. TXV must be hard-shutoff type.

NOTE: Units are rated with 25 ft (7.6 m) of lineset length. See Vapor Line Sizing and Cooling Capacity Loss table when using other sizes and lengths of lineset.

## Fuel Requirements

Fuel System	14RESA	20RESA
Fuel types	Natural Gas or LP Vapor	
Fuel supply inlet	1/2 NPT	
Fuel supply pressure, kPa (in. H <sub>2</sub> O):		
Natural gas	1.2-2.7 (5-11)	
LP	1.7-2.7 (7-11)	

Fuel Composition Limits *	Nat. Gas	LP Gas
Methane, % by volume (minimum)	90 min.	—
Ethane, % by volume (maximum)	4.0 max.	—
Propane, % by volume	1.0 max.	85 min.
Propene, % by volume (maximum)	0.1 max.	5.0 max.
C <sub>4</sub> and higher, % by volume	0.3 max.	2.5 max.
Sulfur, ppm mass (maximum)	25 max.	
Lower heating value, MJ/m <sup>3</sup> (Btu/ft <sup>3</sup> ), min.	33.2 (890)	84.2 (2260)

\* Contact your local distributor for suitability and rating derates based on fuel compositions outside these limits.

## Operation Requirements

Fuel Consumption					
Model	Fuel Type	% Load	Fuel Consumption, m <sup>3</sup> /hr. (cfh)		
			60 Hz	50 Hz	
14RESA	Natural Gas	100	5.4 (193)	4.9 (175)	
		75	4.7 (163)	4.2 (148)	
		50	3.5 (124)	3.1 (108)	
		25	2.6 (93)	2.4 (84)	
	LP Vapor	100	2.3 (81)	2.1 (74)	
		75	2.1 (75)	1.9 (68)	
		50	1.8 (60)	1.5 (53)	
		25	1.2 (45)	1.1 (40)	
20RESA	Natural Gas	100	8.0 (281)	6.4 225	
		75	6.9 (243)	5.4 189	
		50	4.6 (161)	3.9 139	
		25	3.6 (127)	2.9 103	
	LP Vapor	100	3.9 (136)	2.9 102	
		75	3.1 (109)	2.4 85	
		50	2.3 (82)	1.8 63	
		25	1.7 (59)	1.3 47	

Nominal fuel rating: Natural gas: 37 MJ/m<sup>3</sup> (1000 Btu/ft.<sup>3</sup>)  
 LP gas: 93 MJ/m<sup>3</sup> (2500 Btu/ft.<sup>3</sup>)

LP gas conversion factors: 8.58 ft.<sup>3</sup> = 1 lb.  
 0.535 m<sup>3</sup> = 1 kg  
 36.39 ft.<sup>3</sup> = 1 gal.

## Sound Data

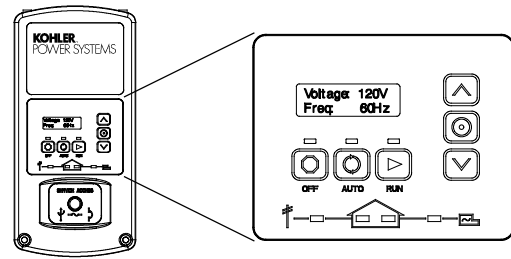
Model 14RESA sound level is 63 dBA during weekly engine exercise and 67 dBA during full-speed generator diagnostics and normal operation.

Model 20RESA sound level is 64 dBA during weekly engine exercise and 69 dBA during full-speed generator diagnostics and normal operation.

All sound levels are measured at 7 meters with no load.

Sound Data - NG  
(20-minute Exercise  
Per Operation's  
Manual)

## RDC2 Controller



The RDC2 controller provides integrated control for the generator set, Kohler® Model RXT transfer switch, programmable interface module (PIM), and load control module (LCM).

The RDC2 controller's 2-line LCD screen displays status messages and system settings that are clear and easy to read, even in direct sunlight or low light.

## RDC2 Controller Features

- Membrane keypad
  - OFF, AUTO, and RUN pushbuttons
  - Select and arrow buttons for access to system configuration and adjustment menus
- LED indicators for OFF, AUTO, and RUN modes
- LED indicators for utility power and generator set source availability and ATS position (Model RXT transfer switch required)
- LCD display
  - Two lines x 16 characters per line
  - Backlit display with adjustable contrast for excellent visibility in all lighting conditions
- Scrolling system status display
  - Generator set status
  - Voltage and frequency
  - Engine temperature
  - Oil pressure
  - Battery voltage
  - Engine runtime hours
- Date and time displays
- Smart engine cooldown senses engine temperature
- Digital isochronous governor to maintain steady-state speed at all loads
- Digital voltage regulation: ± 0.5% RMS no-load to full-load
- Automatic start with programmed cranking cycle
- Programmable exerciser can be set to start automatically on any future day and time, and run every week or every two weeks
- Exercise modes
  - Unloaded weekly exercise with complete system diagnostics
  - Unloaded full-speed exercise
  - Loaded full-speed exercise (Model RXT ATS required)
- Front-access mini USB connector for SiteTech™ connection
- Front access mini-breaker protects the alternator
- Integral Ethernet connector for Kohler® OnCue™
- Built-in 2.5 amp battery charger
- Remote two-wire start/stop capability for optional connection of Model RDT or RSB transfer switches

See additional controller features on the next page.

**APPENDIX D**  
**Traffic Data, STAMSON Calculations and Email Correspondence**  
**(4 Pages)**

Table D.1 - Summary of Road Traffic Counts and Projections <sup>[1]</sup>

Road Number	Road Name	Year of Count	AADT	Projection Year	Projected AADT <sup>[2]</sup>	Day / Night Split <sup>[3]</sup>	Cars <sup>[4]</sup>		Medium Trucks <sup>[5]</sup>		Heavy Trucks <sup>[6]</sup>	
							Day	Night	Day	Night	Day	Night
#1	Westmount Road	2024	2050	2036	2451	85/15	1950	344	77	14	56	10

Notes

1. The road traffic data were obtained from the City of Guelph on July 24, 2025.
2. The volumes in 2036 were projected based on an annual 1.5% compounded growth rate advised by the City of Guelph.
3. The day/night splits of 85% and 15% are used, to ensure the night hourly vehicles exceed 40.
4. Car percentage is 93.6%, based on the truck percentage.
- 5,6. Truck percentages are 3.7% (7/12 of 6.4%) and 2.7% (5/12 of 6.4%) for medium and heavy trucks, respectively. The total truck percentage is 6.4%.

## Weidong Li

---

**From:** Gwen Zhang <Gwen.Zhang@guelph.ca>  
**Sent:** July 28, 2025 4:58 PM  
**To:** Weidong Li  
**Subject:** RE: Traffic Data Request for Noise Study

This Email is from an **EXTERNAL** source. Ensure you trust this sender before clicking on any links or attachments.

Hi Weidong,

The data were collected in October 2024.

Regards,  
Gwen

---

**From:** Weidong Li <wli@Pinchin.com>  
**Sent:** Monday, July 28, 2025 3:59 PM  
**To:** Gwen Zhang <Gwen.Zhang@guelph.ca>  
**Subject:** RE: Traffic Data Request for Noise Study

**[EXTERNAL EMAIL]** This email originates outside the City of Guelph. Do not click links or attachments unless you recognize the sender and know the content is safe.

Hi Gwen,

Can you let me know in what year the traffic data was collected?

Thanks,

**Weidong Li, Ph.D., P.Eng.**  
*Senior Project Engineer, Emissions Reduction & Compliance*  
Pinchin Ltd. | Cell: 647.287.1677

---

**From:** Weidong Li  
**Sent:** July 24, 2025 4:08 PM  
**To:** Gwen Zhang <[Gwen.Zhang@guelph.ca](mailto:Gwen.Zhang@guelph.ca)>  
**Cc:** Transportation <[Transportation@guelph.ca](mailto:Transportation@guelph.ca)>  
**Subject:** RE: Traffic Data Request for Noise Study

Thank you! Have a great day!

Weidong Li, Ph.D., P.Eng.

Senior Project Engineer, Emissions Reduction & Compliance  
Pinchin Ltd. | Cell: 647.287.1677

---

**From:** Gwen Zhang <[Gwen.Zhang@guelph.ca](mailto:Gwen.Zhang@guelph.ca)>  
**Sent:** July 24, 2025 4:01 PM  
**To:** Weidong Li <[wli@Pinchin.com](mailto:wli@Pinchin.com)>  
**Cc:** Transportation <[Transportation@guelph.ca](mailto:Transportation@guelph.ca)>  
**Subject:** RE: Traffic Data Request for Noise Study

You don't often get email from [gwen.zhang@guelph.ca](mailto:gwen.zhang@guelph.ca). [Learn why this is important](#)

This Email is from an **EXTERNAL** source. Ensure you trust this sender before clicking on any links or attachments.

Hi Weidong,

The following information is based on the existing traffic condition near 91-93 Westmount Road in Guelph.

- AADT: 2,050 vpd
- Commercial trucks: 6.4%
- Annual growth rate: 1.5%

Let me know if you have any questions.

Thanks,

**Gwen Zhang, P.Eng** (she/her), Transportation Planning Engineer  
**Engineering and Transportation Services**  
T 519-822-1260 x 2638  
E [gwen.zhang@guelph.ca](mailto:gwen.zhang@guelph.ca)

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**From:** Weidong Li <[wli@Pinchin.com](mailto:wli@Pinchin.com)>  
**Sent:** Thursday, July 17, 2025 10:20 AM  
**To:** Transportation <[Transportation@guelph.ca](mailto:Transportation@guelph.ca)>  
**Subject:** Traffic Data Request for Noise Study

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Hello,

Pinchin is working with our client to prepare a noise impact study for a proposed development at 91-93 Westmount Road in Guelph. As part of the study, we need to evaluate the traffic noise impact from Westmount Road. Would you be able to provide the following traffic information?

- AADT (Annual Average Daily Traffic) on Westmount Road, south of Speedvale Ave. W.
- Percentage of commercial trucks
- Percentage of annual growth rate

Thanks,

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**Weidong Li, Ph.D., P.Eng.**

*Senior Project Engineer, Emissions Reduction & Compliance*

**Pinchin Ltd.**

2360 Meadowpine Blvd., Unit 2, Mississauga ON L5N 6S2

Cell: 647.287.1677 | [pinchin.com](http://pinchin.com)

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**APPENDIX E**  
**Warning Clause**  
**(1 Page)**

**Warning Clause Type C**

"This building has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the municipal and provincial sound level limits."

"The building components of this unit (walls, windows and exterior doors) have been designed to provide acoustic insulation so that, when windows and exterior doors are closed, the indoor sound levels are within the municipal and provincial sound level limits. The details of this building component design are available by contacting the builder of this unit."

**APPENDIX F**  
**CadnaA Sample Output**  
**(4 Pages)**

Receiver  
Name: Classroom - 123  
ID: R1  
X: 558974.85 m  
Y: 4822201.15 m  
Z: 342.26 m

Point Source, ISO 9613, Name: "HVAC Unit - 85 Westmount", ID: "HVAC5"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
5	559006.51	4822200.59	347.50	0	D	A	82.4	0.0	0.0	0.0	0.0	41.1	0.3	-1.1	0.0	0.0	16.6	0.0	0.0	2.1	25.4
7	559006.51	4822200.59	347.50	1	D	A	82.4	0.0	0.0	0.0	0.0	55.9	1.2	-0.6	0.0	0.0	15.6	0.0	0.0	2.1	8.3
9	559006.51	4822200.59	347.50	1	D	A	82.4	0.0	0.0	0.0	0.0	51.6	0.8	-1.6	0.0	0.0	16.6	0.0	0.0	2.9	12.1

Point Source, ISO 9613, Name: "Generator Air Exhaust - 100 Westmount", ID: "GEN\_EX1"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
24	558895.26	4822106.25	338.37	0	D	A	111.4	0.0	0.0	0.0	18.9	52.9	0.6	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	39.4
26	558895.26	4822106.25	338.37	1	D	A	111.4	0.0	0.0	0.0	-7.9	59.2	1.1	-2.2	0.0	0.0	0.0	0.0	0.0	1.4	44.0

Point Source, ISO 9613, Name: "Generator Air Intake - 100 Westmount", ID: "GEN\_IN1"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
27	558895.07	4822102.94	338.15	0	D	A	109.5	0.0	0.0	0.0	0.0	53.0	0.9	-0.9	0.0	0.0	16.9	0.0	0.0	0.0	39.5
28	558895.07	4822102.94	338.15	1	D	A	109.5	0.0	0.0	0.0	0.0	59.2	1.6	-2.4	0.0	0.0	0.0	0.0	0.0	1.1	50.0

Point Source, ISO 9613, Name: "Generator Air Intake - 100 Westmount", ID: "GEN\_IN2"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
30	558898.62	4822099.54	337.99	0	D	A	108.7	0.0	0.0	0.0	0.0	53.1	0.7	-1.1	0.0	0.0	17.5	0.0	0.0	0.0	38.4
31	558898.62	4822099.54	337.99	1	D	A	108.7	0.0	0.0	0.0	0.0	59.3	1.3	-2.4	0.0	0.0	0.0	0.0	0.0	1.2	49.2

Point Source, ISO 9613, Name: "Condenser - 77 Westmount", ID: "CND1"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
32	559065.36	4822135.21	350.27	0	D	A	87.6	0.0	0.0	0.0	0.0	52.0	0.5	-0.2	0.0	0.0	5.0	0.0	0.0	0.0	30.3
33	559065.36	4822135.21	350.27	1	D	A	87.6	0.0	0.0	0.0	0.0	56.7	0.8	-0.7	0.0	0.0	13.2	0.0	0.0	5.6	12.1

Point Source, ISO 9613, Name: "Air Handling Unit - 100 Westmount", ID: "AHR\_3"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
34	558771.40	4822217.96	352.55	0	D	A	92.2	0.0	0.0	0.0	0.0	57.2	0.7	-1.6	0.0	0.0	11.8	0.0	0.0	0.0	24.0
35	558771.40	4822217.96	352.55	1	D	A	92.2	0.0	0.0	0.0	0.0	57.8	0.8	-1.7	0.0	0.0	21.5	0.0	0.0	4.4	9.4
37	558771.40	4822217.96	352.55	1	D	A	92.2	0.0	0.0	0.0	0.0	60.1	0.9	-1.7	0.0	0.0	11.3	0.0	0.0	17.5	4.0

Point Source, ISO 9613, Name: "Heat Recovery Unit - 100 Westmount", ID: "HRU\_1"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
39	558724.18	4822210.58	351.96	0	D	A	93.0	0.0	0.0	0.0	0.0	59.0	1.6	-2.0	0.0	0.0	9.0	0.0	0.0	0.0	25.4
41	558724.18	4822210.58	351.96	1	D	A	93.0	0.0	0.0	0.0	0.0	59.5	1.7	-2.0	0.0	0.0	23.3	0.0	0.0	1.7	8.8
43	558724.18	4822210.58	351.96	1	D	A	93.0	0.0	0.0	0.0	0.0	59.6	1.7	-1.9	0.0	0.0	4.8	0.0	0.0	1.0	27.7

Point Source, ISO 9613, Name: "Heat Recovery Unit - 100 Westmount", ID: "HRU\_2"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
46	558757.86	4822253.86	351.96	0	D	A	92.0	0.0	0.0	0.0	0.0	58.0	1.7	-1.6	0.0	0.0	17.6	0.0	0.0	0.0	16.2

Point Source, ISO 9613, Name: "HVAC Unit - 77 Westmount", ID: "HVAC4"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahouus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
48	559042.33	4822160.42	343.17	0	D	A	82.4	0.0	0.0	0.0	0.0	48.9	0.6	-0.0	0.0	0.0	7.0	0.0	0.0	0.0	25.9
50	559042.33	4822160.42	343.17	1	D	A	82.4	0.0	0.0	0.0	0.0	52.7	0.9	-0.7	0.0	0.0	17.1	0.0	0.0	1.8	10.6
62	559042.33	4822160.42	343.17	1	D	A	82.4	0.0	0.0	0.0	0.0	55.0	1.1	-1.1	0.0	0.0	20.6	0.0	0.0	3.3	3.3

Point Source, ISO 9613, Name: "HVAC Unit - 77 Westmount", ID: "HVAC3"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
63	559048.71	4822154.33	343.17	0	D	A	82.4	0.0	0.0	0.0	0.0	49.8	0.7	-0.3	0.0	0.0	6.6	0.0	0.0	25.6
70	559048.71	4822154.33	343.17	1	D	A	82.4	0.0	0.0	0.0	0.0	52.1	0.8	-0.6	0.0	0.0	17.2	0.0	1.8	11.1
86	559048.71	4822154.33	343.17	1	D	A	82.4	0.0	0.0	0.0	0.0	55.5	1.1	-1.0	0.0	0.0	20.5	0.0	3.4	2.9

Point Source, ISO 9613, Name: "HVAC Unit - 77 Westmount", ID: "HVAC1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
91	559048.95	4822147.17	343.17	0	D	A	82.4	0.0	0.0	0.0	0.0	50.2	0.7	-0.4	0.0	0.0	5.6	0.0	0.0	26.3
93	559048.95	4822147.17	343.17	1	D	A	82.4	0.0	0.0	0.0	0.0	51.6	0.8	-0.6	0.0	0.0	16.9	0.0	1.0	12.5
100	559048.95	4822147.17	343.17	1	D	A	82.4	0.0	0.0	0.0	0.0	55.8	1.1	-0.8	0.0	0.0	19.3	0.0	3.5	3.5

Point Source, ISO 9613, Name: "HVAC Unit - 77 Westmount", ID: "HVAC2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
102	559052.31	4822149.75	343.17	0	D	A	82.4	0.0	0.0	0.0	0.0	50.4	0.7	-0.4	0.0	0.0	6.3	0.0	0.0	25.5
106	559052.31	4822149.75	343.17	1	D	A	82.4	0.0	0.0	0.0	0.0	51.7	0.8	-0.6	0.0	0.0	17.2	0.0	1.0	12.2
108	559052.31	4822149.75	343.17	1	D	A	82.4	0.0	0.0	0.0	0.0	55.8	1.1	0.4	0.0	0.0	19.6	0.0	3.9	1.5

Point Source, ISO 9613, Name: "Cooling Towers - 100 Westmount", ID: "CT1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
110	558793.86	4822145.83	355.82	0	D	A	88.2	0.0	0.0	0.0	0.0	56.6	0.9	-1.7	0.0	0.0	8.8	0.0	0.0	23.7
123	558793.86	4822145.83	355.82	1	D	A	88.2	0.0	0.0	0.0	0.0	57.4	0.9	-1.8	0.0	0.0	19.3	0.0	4.0	8.3
127	558793.86	4822145.83	355.82	1	D	A	88.2	0.0	0.0	0.0	0.0	56.9	0.9	-1.7	0.0	0.0	8.2	0.0	1.0	22.8

Point Source, ISO 9613, Name: "Cooling Towers - 100 Westmount", ID: "CT2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
130	558791.47	4822147.12	355.82	0	D	A	88.2	0.0	0.0	0.0	0.0	56.7	0.9	-1.7	0.0	0.0	8.5	0.0	0.0	23.9
135	558791.47	4822147.12	355.82	1	D	A	88.2	0.0	0.0	0.0	0.0	57.5	0.9	-1.8	0.0	0.0	19.2	0.0	4.0	8.3
139	558791.47	4822147.12	355.82	1	D	A	88.2	0.0	0.0	0.0	0.0	56.9	0.9	-1.7	0.0	0.0	7.7	0.0	1.0	23.4

Point Source, ISO 9613, Name: "Air Handling Unit - 100 Westmount", ID: "AHR_1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
141	558762.30	4822215.19	352.55	0	D	A	88.5	0.0	0.0	0.0	0.0	57.6	0.9	-1.7	0.0	0.0	9.2	0.0	0.0	22.6
151	558762.30	4822215.19	352.55	1	D	A	88.5	0.0	0.0	0.0	0.0	58.2	1.0	-1.8	0.0	0.0	21.3	0.0	4.0	5.9
163	558762.30	4822215.19	352.55	1	D	A	88.5	0.0	0.0	0.0	0.0	59.2	1.1	-1.8	0.0	0.0	4.8	0.0	1.9	23.3
171	558762.30	4822215.19	352.55	1	D	A	88.5	0.0	0.0	0.0	0.0	59.8	1.2	-1.8	0.0	0.0	7.0	0.0	5.2	17.1

Point Source, ISO 9613, Name: "Air Handling Unit - 100 Westmount", ID: "AHR_2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
175	558753.43	4822217.02	352.95	0	D	A	87.6	0.0	0.0	0.0	0.0	57.9	1.0	-1.8	0.0	0.0	7.3	0.0	0.0	23.2
183	558753.43	4822217.02	352.95	1	D	A	87.6	0.0	0.0	0.0	0.0	58.5	1.0	-1.8	0.0	0.0	20.9	0.0	3.7	5.3

Point Source, ISO 9613, Name: "HVAC Unit - 97 Westmount", ID: "HVAC8"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
200	558956.15	4822241.97	341.34	0	D	A	72.3	0.0	0.0	0.0	0.0	44.0	0.3	-0.1	0.0	0.0	23.4	0.0	0.0	4.7

Point Source, ISO 9613, Name: "HVAC Unit - 97 Westmount", ID: "HVAC9"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
206	558955.52	4822242.55	341.36	0	D	A	72.3	0.0	0.0	0.0	0.0	44.2	0.3	-0.1	0.0	0.0	23.4	0.0	0.0	4.5

Point Source, ISO 9613, Name: "HVAC Unit - 100 Westmount", ID: "HVAC7"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
212	558791.81	4822177.05	345.37	0	D	A	82.4	0.0	0.0	0.0	0.0	56.3	1.2	-1.8	0.0	0.0	2.9	0.0	0.0	23.8
217	558791.81	4822177.05	345.37	1	D	A	82.4	0.0	0.0	0.0	0.0	57.1	1.3	-1.9	0.0	0.0	16.9	0.0	2.0	6.9
220	558791.81	4822177.05	345.37	1	D	A	82.4	0.0	0.0	0.0	0.0	57.8	1.3	-1.9	0.0	0.0	18.3	0.0	2.7	4.3
224	558791.81	4822177.05	345.37	1	D	A	82.4	0.0	0.0	0.0	0.0	57.1	1.3	-1.9	0.0	0.0	4.9	0.0	1.0	19.9

Point Source, ISO 9613, Name: "HVAC Unit - 100 Westmount", ID: "HVAC6"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
229	558790.34	4822178.25	345.37	0	D	A	82.4	0.0	0.0	0.0	0.0	56.4	1.2	-1.8	0.0	0.0	2.0	0.0	0.0	24.6
232	558790.34	4822178.25	345.37	1	D	A	82.4	0.0	0.0	0.0	0.0	57.2	1.3	-1.9	0.0	0.0	16.9	0.0	2.0	6.9
236	558790.34	4822178.25	345.37	1	D	A	82.4	0.0	0.0	0.0	0.0	57.2	1.3	-2.0	0.0	0.0	4.9	0.0	1.0	19.9

Point Source, ISO 9613, Name: "Condensers - 100 Westmount", ID: "CND2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
241	558833.18	4822138.03	337.01	0	D	A	79.6	0.0	0.0	0.0	0.0	54.8	0.4	-0.4	0.0	0.0	15.8	0.0	0.0	8.9
247	558833.18	4822138.03	337.01	1	D	A	79.6	0.0	0.0	0.0	0.0	55.9	0.5	-1.1	0.0	0.0	22.8	0.0	4.5	-3.1
250	558833.18	4822138.03	337.01	1	D	A	79.6	0.0	0.0	0.0	0.0	56.8	0.5	1.2	0.0	0.0	8.5	0.0	1.4	11.1
253	558833.18	4822138.03	337.01	1	D	A	79.6	0.0	0.0	0.0	0.0	57.2	0.5	0.2	0.0	0.0	15.1	0.0	1.6	4.9

Point Source, ISO 9613, Name: "General Exhaust - 100 Westmount", ID: "EX6"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
256	558841.36	4822154.08	343.95	0	D	A	76.6	0.0	0.0	0.0	0.0	54.0	0.8	-1.7	0.0	0.0	0.0	0.0	0.0	23.5
260	558841.36	4822154.08	343.95	1	D	A	76.6	0.0	0.0	0.0	0.0	55.2	0.9	-1.8	0.0	0.0	16.0	0.0	2.9	3.5
263	558841.36	4822154.08	343.95	1	D	A	76.6	0.0	0.0	0.0	0.0	54.5	0.8	-1.7	0.0	0.0	0.0	0.0	1.0	22.0

Point Source, ISO 9613, Name: "Kitchen Exhaust - 100 Westmount", ID: "EX1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
266	558767.41	4822230.62	338.93	0	D	A	79.8	0.0	0.0	0.0	0.0	57.4	1.1	0.3	0.0	0.0	0.0	0.0	0.0	21.0
270	558767.41	4822230.62	338.93	1	D	A	79.8	0.0	0.0	0.0	0.0	57.5	1.1	0.5	0.0	0.0	0.0	0.0	1.0	19.6

Point Source, ISO 9613, Name: "General Exhaust - 100 Westmount", ID: "EX7"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
274	558797.35	4822198.40	344.72	0	D	A	76.6	0.0	0.0	0.0	0.0	56.0	0.9	-1.7	0.0	0.0	0.0	0.0	0.0	21.5
278	558797.35	4822198.40	344.72	1	D	A	76.6	0.0	0.0	0.0	0.0	56.8	1.0	-1.8	0.0	0.0	15.9	0.0	3.0	1.8
281	558797.35	4822198.40	344.72	1	D	A	76.6	0.0	0.0	0.0	0.0	58.0	1.1	-1.9	0.0	0.0	9.2	0.0	1.2	9.0
286	558797.35	4822198.40	344.72	1	D	A	76.6	0.0	0.0	0.0	0.0	58.4	1.2	-1.9	0.0	0.0	13.3	0.0	4.5	1.2
289	558797.35	4822198.40	344.72	1	D	A	76.6	0.0	0.0	0.0	0.0	56.4	1.0	-1.8	0.0	0.0	0.0	0.0	1.1	20.0

Point Source, ISO 9613, Name: "General Exhaust - 100 Westmount", ID: "EX5"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
295	558791.76	4822166.84	345.17	0	D	A	76.6	0.0	0.0	0.0	0.0	56.4	1.0	-1.9	0.0	0.0	4.5	0.0	0.0	16.6
299	558791.76	4822166.84	345.17	1	D	A	76.6	0.0	0.0	0.0	0.0	57.2	1.0	-1.9	0.0	0.0	20.3	0.0	3.3	-3.4
302	558791.76	4822166.84	345.17	1	D	A	76.6	0.0	0.0	0.0	0.0	57.4	1.1	-1.8	0.0	0.0	20.1	0.0	4.3	-4.4
306	558791.76	4822166.84	345.17	1	D	A	76.6	0.0	0.0	0.0	0.0	56.7	1.0	-1.8	0.0	0.0	0.0	0.0	1.0	19.7

Point Source, ISO 9613, Name: "General Exhaust - 100 Westmount", ID: "EX4"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
309	558761.46	4822224.79	344.42	0	D	A	76.6	0.0	0.0	0.0	0.0	57.6	1.1	-1.6	0.0	0.0	0.0	0.0	0.0	19.5
311	558761.46	4822224.79	344.42	1	D	A	76.6	0.0	0.0	0.0	0.0	58.2	1.1	-1.5	0.0	0.0	15.8	0.0	4.1	-1.1
313	558761.46	4822224.79	344.42	1	D	A	76.6	0.0	0.0	0.0	0.0	59.5	1.3	-1.8	0.0	0.0	22.4	0.0	4.3	-9.0

Point Source, ISO 9613, Name: "General Exhaust - 100 Westmount", ID: "EX3"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
315	558761.81	4822226.48	351.96	0	D	A	76.6	0.0	0.0	0.0	0.0	57.6	1.1	-1.6	0.0	0.0	0.0	0.0	0.0	19.5
317	558761.81	4822226.48	351.96	1	D	A	76.6	0.0	0.0	0.0	0.0	58.2	1.1	-1.5	0.0	0.0	15.6	0.0	4.2	-1.0
318	558761.81	4822226.48	351.96	1	D	A	76.6	0.0	0.0	0.0	0.0	59.5	1.3	-1.8	0.0	0.0	9.4	0.0	3.4	4.8

Point Source, ISO 9613, Name: "General Exhaust - 100 Westmount", ID: "EX2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
320	558759.39	4822228.70	344.52	0	D	A	76.6	0.0	0.0	0.0	0.0	57.7	1.1	-1.5	0.0	0.0	0.0	0.0	0.0	19.3
321	558759.39	4822228.70	344.52	1	D	A	76.6	0.0	0.0	0.0	0.0	58.3	1.1	-1.4	0.0	0.0	15.8	0.0	4.1	-1.3
322	558759.39	4822228.70	344.52	1	D	A	76.6	0.0	0.0	0.0	0.0	59.6	1.3	-1.8	0.0	0.0	21.3	0.0	4.6	-8.4

Receiver  
 Name: External Residence  
 ID: R4  
 X: 559017.67 m  
 Y: 4822212.48 m  
 Z: 344.09 m

Point Source, ISO 9613, Name: "Natural Gas Generator , Development", ID: "NG"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahaus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
1	558985.08	4822206.29	340.34	0	D	A	88.9	0.0	-4.8	0.0	0.0	41.5	0.1	3.8	0.0	0.0	5.7	0.0	0.0	33.1
15	558985.08	4822206.29	340.34	1	D	A	88.9	0.0	-4.8	0.0	0.0	55.8	0.3	4.9	0.0	0.0	14.1	0.0	1.0	7.9
17	558985.08	4822206.29	340.34	1	D	A	88.9	0.0	-4.8	0.0	0.0	41.6	0.1	4.0	0.0	0.0	10.6	0.0	1.0	26.8

Point Source, ISO 9613, Name: "Condenser - Existing , Development", ID: "C.4"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahaus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
19	558988.61	4822209.77	340.24	0	D	A	76.8	0.0	0.0	0.0	0.0	40.4	0.3	0.9	0.0	0.0	4.5	0.0	0.0	30.7
21	558988.61	4822209.77	340.24	1	D	A	76.8	0.0	0.0	0.0	0.0	55.8	1.4	0.3	0.0	0.0	22.4	0.0	1.1	-4.1
38	558988.61	4822209.77	340.24	1	D	A	76.8	0.0	0.0	0.0	0.0	40.6	0.3	0.9	0.0	0.0	0.0	0.0	1.0	33.9

Point Source, ISO 9613, Name: "Condenser - New , Development", ID: "C.1"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahaus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
43	558990.00	4822211.22	340.28	0	D	A	75.4	0.0	0.0	0.0	0.0	39.9	0.2	1.9	0.0	0.0	0.0	0.0	0.0	33.4
47	558990.00	4822211.22	340.28	1	D	A	75.4	0.0	0.0	0.0	0.0	55.8	1.0	1.3	0.0	0.0	18.3	0.0	1.5	-2.5

Point Source, ISO 9613, Name: "Condenser - New , Development", ID: "C.2"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahaus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
49	558982.49	4822205.19	340.14	0	D	A	75.4	0.0	0.0	0.0	0.0	42.2	0.3	2.1	0.0	0.0	14.1	0.0	0.0	16.8
51	558982.49	4822205.19	340.14	1	D	A	75.4	0.0	0.0	0.0	0.0	55.9	1.0	1.6	0.0	0.0	17.1	0.0	1.6	-1.7

Point Source, ISO 9613, Name: "Condenser - Existing , Development", ID: "C.3"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahaus (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
53	558989.31	4822210.48	340.26	0	D	A	69.6	0.0	0.0	0.0	0.0	40.2	0.2	1.3	0.0	0.0	0.0	0.0	0.0	27.9
55	558989.31	4822210.48	340.26	1	D	A	69.6	0.0	0.0	0.0	0.0	55.8	1.1	0.5	0.0	0.0	21.3	0.0	1.1	-10.1
57	558989.31	4822210.48	340.26	1	D	A	69.6	0.0	0.0	0.0	0.0	40.4	0.2	1.3	0.0	0.0	0.0	0.0	1.0	26.6