

NOISE FEASIBILITY STUDY

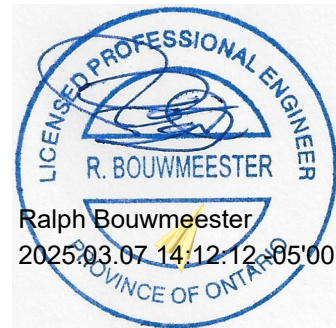
Proposed Residential Apartment Building

“60 Dean Avenue”

City of Barrie
County of Simcoe

Prepared for:

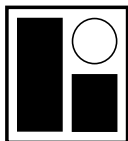
**nestwise Inc.
c/o Pratt Homes**



Prepared by:

Ralph Bouwmeester, P. Eng.

March 7, 2025



R. BOUWMEESTER & ASSOCIATES
165 Browning Trail
Barrie, Ontario, Canada L4N 5E7
tel: (705) 726-3392 fax: (705) 726-3392

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EXECUTIVE SUMMARY

R. BOUWMEESTER & ASSOCIATES has been retained to assess potential noise impacts on residential uses within a proposed 122-unit 7-storey apartment building on the east side of Dean Avenue between Raquel Street and Madelaine Drive in south-east Barrie.

The goals and objectives of this study are four-fold, namely:

1. To identify noise sources and noise-sensitive land uses.
2. To recommend mitigation measures, if and where required.
3. To identify those areas, if any, requiring more detailed studies.
4. To satisfy the development approval requirements of the City of Barrie.

The noise sources potentially impacting this project are future traffic along Dean Avenue and Yonge Street (about 150 m east) as well as stationary noise from existing non-residential uses in the area and an apartment building (under construction) directly south at 70 Dean Avenue.

Road traffic data were provided by the City of Barrie. Roadway noise from cars and medium and heavy trucks is accounted for in this analysis. The traffic volumes apply to Year 2035 thereby providing the 10-year minimum projection window required by the MECP.

Although the predicted traffic sound levels exceed the MECP noise limits, the excess is minor affecting only the units facing Yonge Street. To meet the MECP criteria, these units need forced-air heating sized for future central air conditioning. Since we understand the entire building will be built with central air at the outset, this requirement will be met and exceeded.

No special windows or acoustic barriers are required to reduce traffic noise.

Since the HVAC equipment has not yet been selected for this project, we have made certain assumptions to estimate the potential noise impacts on the surroundings. Noise levels at off-site residential receptors are predicted to meet the MECP criteria.

Information is also not available for the proposed transformers, but based on our assumptions, we expect these to meet the MECP noise criteria at the nearest windows in the subject building.

The review of off-site stationary noise sources reveals that the rooftop HVAC equipment at the under-construction apartment building at 70 Dean may result in noise levels along the south face of the subject building that exceed the MECP criteria. Since these noise levels must be reduced to meet the criteria in the plane of windows, special windows are not a viable solution. Acoustic screens at each of the two make-up air units on the roof of 70 Dean will likely be required which requires coordination and cooperation with the owner of 70 Dean. Final requirements must be confirmed once the equipment sound data is available.

The estimated stationary noise levels and mitigation requirements must be confirmed at the building permit stage once equipment selections have been made and sound data is available.

In summary, based on our analysis and recommendations, the subject development is feasible and can meet the transportation and stationary noise requirements of MECP guideline NPC-300.

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1. INTRODUCTION

R. BOUWMEESTER & ASSOCIATES has been retained to assess potential noise impacts on residential uses within a proposed 122-unit 7-storey apartment building on the east side of Dean Avenue between Raquel Street and Madelaine Drive in south-east Barrie. See Figure 1. (In this study, Dean Avenue is assumed to run north-south.)

Our analysis is based on the configuration of the development as shown on a Conceptual Site Plan by Jones Consulting dated February 27, 2025. See Appendix 'C'.

2. GOALS AND OBJECTIVES

The goals and objectives of this study are four-fold, namely:

1. To identify noise sources and noise-sensitive land uses.
2. To recommend mitigation measures, if and where required.
3. To identify those areas, if any, requiring more detailed studies.
4. To satisfy the development approval requirements of the City of Barrie.

3. NOISE SOURCES

The noise sources potentially impacting this project are future traffic along Dean Avenue and Yonge Street (about 150 m east), and stationary noise from existing non-residential uses in the area and an apartment building (under construction) directly to the south at 70 Dean Avenue. Traffic data (see Appendix 'A') were provided by the City of Barrie.

4. GUIDELINES AND CRITERIA

Reference is made to Ministry of the Environment (MECP) publication, Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning (Publication NPC-300, Aug 2013 ver. #22) which recommends various sound level limits for indoor and outdoor settings, under different time scenarios, and under differing uses.

4.1 Sound Level Limits

Table 1 following summarizes the NPC-300 sound level limits for road traffic:

TABLE 1 - Sound Level Limits (Leq)

Location	Time Period		Limit (dBA)
<u>Outdoor</u>			
Outdoor Living Area	Day	0700-2300 hrs	55
<u>Indoor</u>			
Living/Dining Room	All	0700-0700 hrs	45
Bedroom (day)	Day	0700-2300 hrs	45
Bedroom (night)	Night	2300-0700 hrs	40

As compared to earlier MECP noise guidelines, NPC-300 has set indoor sound level limits in bedrooms for the daytime period in addition to nighttime.

4.2 Noise Control Measures

NPC-300 states that *"Noise control measures are not required if the sound level estimated in the OLA is 55 dBA or less during the daytime and 50 dBA or less in the plane of bedroom windows during either daytime or nighttime"*.

4.2.1 Outdoor Living Areas

The above-noted outdoor limit of 55 dBA applies to a protected Outdoor Living Area (OLA) of at least 56 m² (600 sq. ft.) in the case of single-family detached homes, 46 m² (500 sq. ft.) in the case of semi-detached units, and 37 m² (400 sq. ft.) in the case of row or townhouse units.

The MECP guidelines indicate that *"Noise control measures are not required if the sound level estimated in the OLA is 55 dBA or less during the daytime"*.

The guidelines state that if the sound level is greater than 55 dBA and less than or equal to 60 dBA, *"noise control measures may be applied to reduce the sound level to 55 dBA. If measures are not provided, prospective purchasers or tenants should be informed of potential noise problems by a warning clause Type A"*.

The guidelines further state that if the sound level in the Outdoor Living Area is greater than 60 dBA, *"noise control measures should be implemented to reduce the level to 55 dBA. Only in cases where the required noise control measures are not feasible for technical, economic or administrative reasons would an excess above the limit (55 dBA) be acceptable with a warning clause Type B. In the above situations, any excess above the limit will not be acceptable if it exceeds 5 dBA."* Acoustic barriers typically provide the mitigation needed, and warning clauses are required to be registered on title against the affected units.

4.2.2 Plane of Window - Ventilation Requirements

Ventilation requirements to reduce indoor sound levels, by allowing windows to remain closed if so desired by the occupants, include the following:

- For outdoor daytime sound levels in the plane of living/dining/bedroom windows greater than 55 dBA and less than or equal to 65 dBA, dwelling units must be equipped with forced air heating systems with ducting sized for the future installation of central air conditioning. Window, wall, and door components meeting normal Ontario Building Code requirements are typically adequate under these conditions, although warning clauses (Types B and C) must be registered on title against the affected lots.
- For outdoor daytime sound levels in the plane of living/dining/bedroom windows greater than 65 dBA, dwelling units must be equipped with central air conditioning. Warning clauses (Types B and D) must be registered on title against the affected lots.

Ventilation requirements under nighttime conditions are similar to the above except that 50 and 60 dBA are used in place of 55 dBA and 65 dBA, respectively.

The location and installation of outdoor air conditioning devices must comply with the sound level limits of Publication NPC-216 and guidelines contained in Environmental Noise Guidelines for Installation of Residential Air Conditioning Devices or such other criteria as specified by the municipality.

4.2.3 Indoor Living Areas - Building Component Requirements

If daytime sound levels outside living/dining/bedroom windows exceed 65 dBA (or nighttime levels exceed 60 dBA) building components including windows, walls and doors must be designed so that the indoor sound levels meet the sound level limits quoted in Table 1.

The above-noted sound level limits and mitigation requirements are summarized below.

TABLE 2 - Sound Level Limits and Standard Mitigation Requirements

	<u>Outdoor Sound Level Limits (dBA)</u>		
	<u>Plane of Window</u>		OLA
	Day	Night	
Do nothing	≤55	≤50	≤55
Noise barrier <u>or</u> Warning Clause A			56 - 60
Mandatory noise barrier *			>60
Provision for future A/C **	56 - 65	51 - 60	
Mandatory A/C **	>65	>60	
Special building component design	>65	>60	

Notes:

* Warning Clause B is required if the mitigated sound level is 56-60 dBA (to the maximum allowable 60 dBA).

** Warning clauses required (A, B and C for future central air; A, B and D for mandatory central air).

5. ANALYSIS PROCEDURES

5.1 Surroundings and Site Characteristics

The 0.667 ha site is located on the east side of Dean Avenue immediately south of the Painswick Branch of the Barrie Public Library at 48 Dean Avenue. See Figure 1. The subject property was formerly part of the library lands; it was recently severed.

A 4 to 9-storey apartment building is under construction immediately to the south, an existing plaza is located to the east, and low-rise residential is located to the west across Dean Avenue. Beyond the library to the north lies a Zehrs grocery store (about 100 m north of the subject site).

The proposed apartment building contains 122 units in seven storeys. Due to the upward slope easterly across the site, the east end of the building is six storeys in height. A privately-owned public space (POPS) is proposed in the front yard adjacent to Dean Avenue, and common amenity space is proposed indoors. See Appendix 'C'.

5.2 Noise Sources

Based on site visits, the primary noise source of concern is future traffic on Dean Avenue and Yonge Street. Potential noise from GO Transit / Metrolinx traffic on the rail line 650 m to the east is considered to be acoustically insignificant due to the separation distance. It is not discussed further herein.

This analysis accounts for noise from cars and medium and heavy trucks, and it assumes that the subject roads are of infinite length.

The traffic noise source heights used are in accordance with MECP criteria.

Based on site observations, noise from rooftop HVAC equipment at Zehrs is acoustically insignificant. The equipment is well-screened.

Despite best efforts to obtain sound data for the rooftop HVAC equipment at the library and at the apartment building to the south (i.e. 70 Dean Avenue), this report relies on assumptions based on our experience with similar projects. Typical noise emission levels were also assumed for the plaza rooftop HVAC equipment.

The subject building will include several noise sources that may impact residential uses to the south and west. Preliminary equipment types have been provided by our Client and the architect. These include a rooftop make-up air (MUA) unit and a chiller in locations per the architectural plans. The plans also show exhaust fans from the underground garage, one in a well on the east side and one above-grade on the south. Since the mechanical system has not yet been designed, we have made assumptions regarding the noise emission levels based on the equipment types provided and on similar projects.

Similarly, the Site Plan shows two hydro transformers at the property corners along Dean Avenue. Since sizing information is not available, we have again made assumptions.

Garbage handling is proposed indoors; it is not expected to be a significant noise source.

5.3 Traffic Data

The City of Barrie provided Year 2024 traffic counts, projected annual growth rates, truck percentages, and speed limits for Dean Avenue and Yonge Street. See Appendix 'A' for details.

Our analysis is based on Year 2035 traffic volumes which provide the 10-year minimum projection window required by the MECP.

Truck traffic is assumed to be split evenly between mediums and heavies, and we have used the posted speed limits of 40 kph for Dean Avenue and 50 kph for Yonge Street.

Based on Simcoe County mapping, we have used road grades of 1.9% for Dean Avenue and 1.4 % for Yonge Street.

The MECP-recommended percentage splits for day and night time road traffic volumes were used in this study (i.e. 90/10 for arterial roads).

5.4 Study Periods

The study periods, as per MECP guidelines, are the 16-hour daytime period between 7:00 AM and 11:00 PM, and the 8-hour nighttime period from 11:00 PM and 7:00 AM.

5.5 Sound Level Prediction Model

Noise level calculations were carried out in accordance with MECP guidelines (Environmental Noise Assessment in Land Use Planning, Training Manual, Ontario Ministry of the Environment, 1987) and through the use of their road noise model ORNAMENT. See References.

5.6 Correction Factors

The corrections required by the MECP to be applied to the noise levels have been taken into account where applicable. These include corrections such as:

- a) Road segment lengths
- b) Ground surface type
- c) Source - receiver distance
- d) Height of elevated source/receiver, and
- e) Day/night split in traffic volumes.

6. CALCULATED EQUIVALENT SOUND LEVELS

6.1 Traffic Sound Levels

Indoor sound levels are typically estimated by calculating outdoor levels along the face of a wall exposed to the noise source (i.e. in the plane of windows). Under NPC-300, day and nighttime receiver heights are set at bedroom windows which are typically 4.5 m above grade in a typical single or semi-detached house or townhouse.

We note that, since sound levels increase with building height (due to a reduction in the effect of ground attenuation), worst-case receptors are typically located at the uppermost floor in multi-storey building scenarios. In this case, the receptor heights were derived from the elevation plans included in the architectural set.

Decks and balconies are exempt from the MECP outdoor noise limits unless they are the only outdoor living area available, and they are at least 4.0 m deep, outside the building façade, and unenclosed. The terraces at the east and west ends of the 4th, 5th and the 6th floors exceed this limit, therefore, we have assessed them as outdoor living space.

Shielding by existing buildings and the proposed building was accounted for where applicable; shielding by vegetation was not included.

Our analysis includes a sampling of noise levels that can be expected along the building faces based on the building layout shown on the Site Plan. These noise level predictions were used to flag those areas requiring a more detailed analysis.

The following table summarizes the predicted Year 2035 sound levels due to traffic on Dean Avenue and Yonge Street. See Figure 2 for receptor locations and Appendix 'B' for sample calculations.

The results in Table 3 confirm that mitigation measures are required in order to ensure that daytime and nighttime traffic sound levels meet the MECP limits.

TABLE 3 - Predicted Outdoor Traffic Sound Levels (dBA)

Receptor	Source	Source / Receiver Dist. (m) (Dean / Yonge)	Outdoor Equivalent Sound Levels (Leq) Due to Traffic (dBA)		
			Day	Night	OLA
R1 (5 th flr)	Dean / Yonge	21.7 / ----	54	47	n/a
R2 (5 th flr)	Dean / Yonge	32.8 / 251.5	50	43	n/a
R3 (7 th flr)	Dean / Yonge	59.7 / 224.6	50	43	n/a
R4 (5 th flr)	Dean / Yonge	93.0 / 191.3	52	45	n/a
R5 (5 th flr)	Dean / Yonge	---- / 177.3	<u>57</u>	50	n/a
R6 (7 th flr)	Dean / Yonge	96.6 / 187.8	54	47	n/a
R7 (7 th flr)	Dean / Yonge	63.3 / 221.1	53	47	n/a
R8 (5 th flr)	Dean / Yonge	32.1 / 252.3	54	47	n/a
R9 (POPS)	Dean / Yonge	16.8 / ----	n/a	n/a	54

The estimated unmitigated sound levels that exceed the MECP limits are underlined. Based on the Table 2 outdoor noise limits and typical mitigation measures, forced-air heating systems sized for the future installation of central air conditioning is required for units with living/dining room windows facing Yonge Street. Since we understand that the proposed building will be air-conditioned, this meets and exceeds the requirement, and no additional physical controls are required for traffic noise.

See Section 6.3 for additional details.

6.2 Stationary Sound Levels

Impact on the Proposal from the Surroundings

As indicated in Section 5.2, noise from rooftop HVAC equipment at Zehrs is acoustically insignificant. The equipment appears to be well-screened and the resulting sound levels at the subject site are barely audible based on observation.

We have estimated the sound levels at the subject site for the following:

- 3 rooftop HVAC units (sources S1 to S3) at the library to the north
- 29 rooftop HVAC units (sources S4 to S32) at the plaza to the east, and
- 2 rooftop make-up air units (sources S33 and S35) and a cooling tower (source S34) at the under-construction apartment building to the south.

The locations of the units were derived from aerial photos (Google Earth and Simcoe County). For the library we assumed two 7.5-ton units and one 10-ton unit, and for the plaza we assumed all 5-ton units. For these we assumed typical units, such as Carrier Series 48TFE, that have noise ratings of 8.1 bels (81 dBA) for the 5-ton units, 8.7 bels (87 dBA) for the 7.5-ton units, and 8.8 bels (88 dBA) for the 10-ton unit (see attached spec sheet). For the apartment roof to the south, we assumed sound ratings of 90 dBA for each of the MUAs (S33 and S35); for the cooling tower (S34) we used a reference sound level of 79 dBA at 1.5 m per the spec sheet provided by the manufacturer (see attached).

We have assumed that all units operate concurrently for a full hour during the daytime period, 75% during the evening, and 50% at night. The 75% and 50% duty cycles result in sound level reductions of about 1 dB and 3 dB, respectively.

TABLE 4 - Estimated On-Site Stationary Sound Levels (dBA)

Receptor	Outdoor Equivalent Sound Levels (Leq) Due to Off-Site Stationary Sources (dBA)					
	Unmitigated			Mitigated		
	MECP Noise Limit	50	50	45	50	50
	Day	Eve	Night	Day	Eve	Night
R1 (5 th flr)	-	-	-			
R2 (5 th flr)	<u>51</u>	50	<u>48</u>	48	46	45
R3 (7 th flr)	<u>52</u>	<u>51</u>	<u>49</u>	48	46	45
R4 (5 th flr)	<u>51</u>	50	<u>48</u>	48	46	45
R5 (5 th flr)	46	45	43			
R6 (7 th flr)	48	46	45			
R7 (7 th flr)	48	47	45			
R8 (5 th flr)	38	37	35			
R9 (POPS)	34	33	-			

The estimated unmitigated sound levels that exceed the MECP limits are underlined. These limits are 50 dBA day and evening, and 45 dBA night for a Class 1 Urban Area. The limits are exceeded at Receptors R2, R3 and R4 which are located along the south façade of the proposed building. These excesses are due to the two MUAs (S33 and S35) and the cooling tower (S34) on the roof of the apartment building next door. The cooling tower (S34) is screened by the mechanical penthouse in the case of R3 and R4.

The unmitigated values in Table 4 account for roof edge screening, parapets in the case of the plaza, and screening by the mechanical penthouse on the apartment building. Where a roof edge or parapet breaks the line of sight, the sound levels reduce by at least 5 dBA. Higher reductions were estimated where applicable using the barrier attenuation feature of Stamson; a reduction of 20 dBA was assumed for full screening.

To meet the sound level limits along the south face of the proposed building (e.g. at R2 to R4), we have estimated that a 7 dBA reduction is required for the MUA at S35 and 10 dBA at S33. These reductions can be achieved with screens approximately 2.3 m high at S35 and 1.5 m high at S33 (based on an assumed HVAC height of 1.5 m).

To install barriers at S33 and S35 next door, arrangements must be made with the owner of 70 Dean. Barriers were not called for when 70 Dean was approved because the subject lands were vacant at that time and not anticipated for residential development.

Impact on the Surroundings from the Proposal

The proposed HVAC equipment includes a rooftop make-up air unit (S38) and a chiller (S37) in locations per the architectural plans. The plans also show exhaust fans from the underground garage.

Although the proposed HVAC equipment is not expected to impact the existing homes to the west (at R10) or the apartment building at 70 Dean (R11) to the south, the need for screening should be confirmed once the mechanical details are known at the building permit stage. Allowing for only roof edge screening, we have estimated the worst-case sound levels at the dwellings across Dean Avenue and at the apartment building to the south to be within the MECP limits (see Table 5).

TABLE 5 - Estimated Off-Site Stationary Sound Levels (dBA)

Receptor	Off-Site Outdoor Equivalent Sound Levels (Leq) Due to Proposed Stationary Sources (dBA)			
	Unmitigated			
MECP Noise Limit	50	50	45	
	Day	Eve	Night	Comments
R10 (2 nd flr)	41	39	38	meets MECP
R11 (4 th flr)	47	46	44	meets MECP

Impact from the Proposal on Itself

As indicated in Section 5.2, the Site Plan shows two transformers at the front property corners. Cabinet dimensions and kVA ratings are not known at this time, therefore, we have made assumptions based on similar projects.

The maximum permitted audible sound level for transformers of various sizes is given in CSA standard C227.4-06 Clause 4.9, Table 5 (see attachments). This table includes sizes ranging from 75 kVA to 3000 kVA. We have assumed 500 kVA transformers which have a maximum permitted sound level of 56 dBA; this translates to about 38 dBA at the nearest residential window on the 2nd floor which is acoustically negligible.

Transformer noise should be reviewed when the transformer details are known.

Based on the above, we expect that stationary noise impacts from the proposal, on the surroundings and on itself, will be acceptable.

Stationary noise from HVAC equipment at 70 Dean is expected to exceed the MECP limits along the south façade of the proposal; mitigation at-source and coordination with the owner of 70 Dean will be required.

6.3 Typical Acoustic Requirements for Traffic Noise

The following summarizes typical acoustic requirements for traffic noise and describes how they apply to the subject development. See Section 7 and Table 6 for details.

Warning clauses must be registered on title and included in Development Agreements and Agreements of Purchase and Sale or Lease where sound level limits are exceeded, or where existing or future commercial/industrial uses are located nearby. Based on the predicted noise levels at the building faces, and the proximity of commercial uses, warning clauses are required for all dwelling units (see Table 6) - suggested wording is given in the Notes to Table 6.

Forced air heating systems, with duct work sized to accommodate the future installation of central air conditioning, are required where the sound level due to road traffic in the plane of a living/dining/bedroom window exceeds 55 dBA daytime or 50 dBA nighttime. Future air cooled condenser units should be located in a noise insensitive location. Construction meeting the minimum non-acoustical requirements of the Ontario Building Code will provide adequate sound insulation.

Although this requirement applies to certain units, it is impractical to implement in multi-storey buildings. Since we understand that the proposed building will be air-conditioned, this meets and exceeds this requirement.

Central air conditioning is required where the sound level due to road traffic in the plane of a living/dining/bedroom window exceeds 65 dBA daytime or 60 dBA nighttime. Air-cooled condenser units should be located in noise-insensitive locations. Central air conditioning is not meant to be a sound mitigating measure, although it does provide the dwelling occupants the option of closing windows if so desired.

According to NPC-300, *“Ventilation methods other than central air conditioning are acceptable for high and medium density residential developments, subject to the following conditions:*

- a) *the noise produced by the proposed ventilation system in the space served does not exceed 40 dBA. In practice, this condition usually implies that window air conditioning units are not acceptable;*
- b) *the ventilation system complies with all national, provincial and municipal standards and codes;*
- c) *the ventilation system is designed by a heating and ventilation professional; and*
- d) *the ventilation system enables the windows and exterior doors to remain closed.”*

Special building component design, to ensure that indoor sound levels meet the limits specified in Section 4, is required for residential dwelling units where the sound level in the plane of a living/dining/bedroom window exceeds 65 dBA daytime or 60 dBA nighttime for road traffic. This requirement does not apply to any units.

Acoustic barriers, to protect outdoor living areas, are required where the daytime outdoor sound level in the OLA exceeds 60 dBA. The MECP's sound level objective for outdoor living areas is 55 dBA, however, sound level excesses of up to 5 dBA are permitted with an appropriate warning clause. Residual noise levels (in excess of 55 dBA) resulting from reduced fence heights must be covered through the use of an appropriately worded warning clause to be included in the Development Agreement and in all Offers of Purchase and Sale or Lease for the affected units, and the clause is to be registered on title against those units. Acoustic barriers are not required for this project.

7. **RECOMMENDATIONS**

Traffic Noise

1. All units at the east end of the proposed building facing Yonge Street require warning clauses registered on title and included in all Development Agreements and Agreements of Purchase and Sale or Lease. See Table 6 for details, and see Notes to Table 6 for wording.
2. All units at the east end of the proposed building facing Yonge Street require forced air heating systems with duct work sized to accommodate the future installation of central air conditioning. Since we understand that the proposed building will be air-conditioned at the outset, this meets and exceeds this requirement. See Table 6.

Stationary Noise

Impact on the Proposal from the Surroundings

3. Warning Clause 'E' is required for all units due to the proximity of commercial uses.
4. To meet the sound level limits along the south face of the proposed building, acoustic screens are required for the two make-up air units on the roof of 70 Dean. Before the extents and heights of the screens are finalized, the noise ratings for the units must be verified by the manufacturer (or measured).
5. The estimated heights of the screens at 70 Dean are 2.3 m for the west unit (S35) and 1.5 m for the east unit (S33). Arrangements must be made with the owner of 70 Dean for the installation of these screens.

Impact on the Surroundings from the Proposal

6. Detailed data for the proposed rooftop equipment and garage exhaust fans must be reviewed prior to building permit issuance to ensure that noise from the equipment does not adversely impact residential properties nearby. The need for screening, if any, must be confirmed at that time.

Impact from the Proposal on Itself

6. Noise levels from the proposed transformers must be confirmed once the equipment details are known.

8. CONCLUSIONS

With the incorporation of the recommended noise controls summarized in Section 7 and as contained in Table 6, the MECP noise guidelines can be met in all dwelling units.

In summary, the proposed development is acoustically feasible and can be developed in a manner that satisfies the transportation and stationary noise requirements of MECP guideline NPC-300.

Respectfully submitted,

R. BOUWMEESTER & ASSOCIATES



Ralph Bouwmeester, P. Eng.
Principal

TABLE 6 - Summary of Noise Controls

Units	Central Air Conditioning	Exterior Windows, Walls and Doors	Acoustic Barrier	Warning Clauses ^{1.}
east facade	Yes ^{2.}	OBC	No	A + B + D + E
remainder	No	OBC	No	E
south facade	Requires screening around the two rooftop MUA units at 70 Dean ^{3.}			

Notes:

1. See Notes to Table 6 on following page for wording.
2. These units require forced-air heating systems sized for the future installation of central air conditioning. Since we understand that the building will be air conditioned, this requirement is met and exceeded.
3. Requires verification of the noise emission levels of the MUA units and the heights and extents of any required acoustic screens prior to building permit issuance. This will require coordination with, and the cooperation of, the owner of 70 Dean for the installation of the screens.
4. Detailed sound data for the proposed rooftop mechanical equipment, garage exhaust fans, and hydro transformers to be reviewed, and the mitigation measures confirmed, prior to building permit issuance.
5. Any additional proposed equipment must be reviewed, and mitigations measures, if any, confirmed, prior to building permit issuance.

NOTES TO TABLE 6

1. The location and installation of outdoor air conditioning devices should comply with sound level limits of Publication NPC-216 (*Residential Air Conditioning Devices – Publication NPC-216. 1993. Ontario Ministry of Environment and Energy*) and guidelines contained in Environmental Noise Guidelines for Installation of Residential Air Conditioning Devices (*Environmental Noise Guidelines for Installation of Residential Air Conditioning Devices. September 1994. Ontario Ministry of Environment and Energy. ISBN 0-7778-1616-4. PIBS 2721e01*) or should comply with other criteria specified by the municipality.
2. ‘OBC’ indicates that construction meeting the minimum non-acoustical requirements of the Ontario Building Code will provide adequate sound insulation. ‘Special’ indicates that exterior building components such as windows, walls and doors have to be determined by an acoustic consultant when house plans are available and prior to building permit issuance.
3. Acoustic barriers shall be of solid construction with no cracks, holes or gaps, and having a surface density of no less than 20 kg/sm. Any gaps under the noise barrier that are necessary for drainage purposes must be minimized and localized, and must not deteriorate the acoustical performance. A barrier may consist of a berm, a fence, or both.
4. The following warning clauses must be registered on title and included in the Subdivision Agreement and in all Agreements of Purchase and Sale or Lease for those lots and blocks as specified in Table 6:

TYPE A: *“Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.”*

TYPE B: *“Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.”*

TYPE D: *“This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment.”*

TYPE E: *“Purchasers/tenants are advised that due to the proximity of adjacent commercial uses, noise from existing and future commercial uses may at times be audible.”*

5. Conventional ventilated attic roof construction meeting OBC requirements is satisfactory.
6. All exterior doors must be fully weather-stripped.

REFERENCES

1. Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning (MECP Publication NPC-300, Aug 2013 ver. #22)
2. Environmental Noise Assessment in Land Use Planning (MECP Training Manual, 1987)
3. Road and Rail Noise: Effects on Housing (CMHC, Rev. 1981)
4. ORNAMENT (Ontario Road Noise Analysis Method for Environment and Transportation) (MECP, October 1989)
5. Traffic data (City of Barrie, January 10, 2025)
6. Stamson v5.04

FIGURES

Figure 1 - Location Plan

Figure 2 - Receptor Plan



Location Plan

Scale 1:4000

FIG. 1

March 2025

R. Bouwmeester & Associates



LEGEND



Receptor Location
and floor level

5th



Noise Source Location

Air photo source: Simcoe County
Site Plan source: Jones Consulting

Receptor Plan

Scale: 1 : 2000

FIG. 2

March 2025

R. Bouwmeester & Associates

APPENDICES

- A. Traffic Data
- B. Sample Traffic Sound Level Calculations
- C. Background Site Plan and Architectural Plans
- D. Background HVAC and Mechanical Data
- E. Sample Stationary Noise Calculations

APPENDIX ‘A’

ROAD TRAFFIC DATA

City of Barrie

- Dean Ave (between Raquel and Madelaine)
 - Year 2024 AADT - 3,500 vehicles per day with 3% medium and heavy trucks.
 - Growth rate - 1% per year.
 - Speed Limit 50 kph
- Yonge Street (between Big Bay Point Road and Madelaine)
 - Year 2024 AADT - 15,000 vehicles per day with 5% medium and heavy trucks.
 - Growth rate - 3% per year.
 - Speed Limit 50 kph

Ministry of the Environment, Conservation and Parks

The MECP recommended split for day/night traffic:

- arterial roads 90/10

SUMMARY OF DATA USED IN THIS STUDY

For the purpose of this noise assessment, the following Year 2035 road data apply:

	Dean	Yonge
Traffic volume (AADT)	3,906	20,764
Day/night split (%)	90 / 10	90 / 10
Percent trucks M / H *	1.5 / 1.5	2.5 / 2.5
Posted Speed	40 kph **	50 kph
Number of lanes	2 + 1	4 + 1
ROW width (m)	23	34
Road Grade (%)	1.9	1.4
Pavement Type	normal asphalt	normal asphalt

* split 50/50

** as currently posted

Ralph Bouwmeester

Subject: RE: Traffic Data Request - 48 Dean Avenue
From: Justin MacDonald <Justin.MacDonald@barrie.ca>
Date: 01/10/2025, 2:43 PM
To: Ralph Bouwmeester <rbouwmeester@rogers.com>

The provided data applies both north and south of Raquel. There is about a 5% decrease in volume south of Raquel; however, given this difference is marginal I just cited the higher volume on Dean for ease.

Yonge Street

Current ADT: 15,000 (2024)

Growth Rate: 3% per year

Commercial / Heavy: 5% combined medium/heavy vehicles. Specific split is no available, given the percentage is typical for an arterial roadway with adjacent commercial use I will defer to you on how this is broken out.

Speed Limit: 50km/h

Cross Section: 5 lanes with bike lanes.

Thanks.

Justin MacDonald, LET, C.E.T., PTP

Project Delivery – Transportation Planning, Development Services

The City of Barrie

Mobile 705-734-8020

Please consider the environment before printing this email.

From: Ralph Bouwmeester <rbouwmeester@rogers.com>
Sent: Friday, January 10, 2025 2:12 PM
To: Justin MacDonald <Justin.MacDonald@barrie.ca>
Subject: Re: Traffic Data Request - 48 Dean Avenue

Hi Justin -

Thank you. Yes, that was quick.

Does that ADT apply both north and south of Raquel? Also, please provide the data for Yonge Street.

Thank you.

Regards -
Ralph

Ralph Bouwmeester, P. Eng.
rbouwmeester@rogers.com

R. BOUWMEESTER & ASSOCIATES
Land Development Engineering
Barrie, ON Canada
tel/fax 705-726-3392

On 1/10/2025 1:53 PM, Justin MacDonald wrote:

Hi Ralph,

Happy New Year as well! All the best in 2025.

This request is timely as I am currently collecting various information for this development. As requested,:

Dean Avenue

Current ADT: 3,500 (2024)

Growth Rate: 1% per year

Commercial / Heavy: 3% combined medium/heavy vehicles. Specific split is not available, given the percentage is typical for most minor collector roadways. I will defer to you on how this is broken out.

Speed Limit: 50km/h

Cross Section: 3 lanes with bike lanes.

Hope this helps. If I am missing anything let me know.

Cheers.

Justin MacDonald, LET, C.E.T., PTP

Project Delivery – Transportation Planning, Development Services

The City of Barrie

Mobile 705-734-8020

Please consider the environment before printing this email.

From: Ralph Bouwmeester <rbouwmeester@rogers.com>

Sent: Friday, January 10, 2025 1:45 PM

To: Justin MacDonald <Justin.MacDonald@barrie.ca>

Subject: Traffic Data Request - 48 Dean Avenue

Hi Justin -

Happy New Year. Hope you're keeping well.

For the purpose of a noise study, please provide traffic projections and truck percentages (mediums and heavies) for Dean Ave north and south of Raquel, and for Yonge Street between Big Bay Point Road and Madelaine.

Thank you kindly.

--

Regards -

Ralph

Ralph Bouwmeester, P. Eng.

rbouwmeester@rogers.com

R. BOUWMEESTER & ASSOCIATES

Land Development Engineering

Barrie, ON Canada

tel/fax 705-726-3392

APPENDIX 'B'

SAMPLE SOUND LEVEL CALCULATIONS

STAMSON 5.0 NORMAL REPORT Date: 03-03-2025 12:00:47
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a25001r1.te Time Period: Day/Night 16/8 hours
Description: R1 day/night at 5th flr

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

Car traffic volume : 3409/379 veh/TimePeriod *
Medium truck volume : 53/6 veh/TimePeriod *
Heavy truck volume : 53/6 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 3500
Percentage of Annual Growth : 1.00
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 1.50
Heavy Truck % of Total Volume : 1.50
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Dean (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 21.70 / 21.70 m
Receiver height : 14.30 / 14.30 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Dean (day)

Source height = 1.11 m

ROAD (0.00 + 53.95 + 0.00) = 53.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.29	56.76	0.00	-2.07	-0.74	0.00	0.00	0.00	53.95

Segment Leq : 53.95 dBA

Total Leq All Segments: 53.95 dBA

Results segment # 1: Dean (night)

Source height = 1.11 m

ROAD (0.00 + 47.47 + 0.00) = 47.47 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.29	50.27	0.00	-2.06	-0.74	0.00	0.00	0.00	47.47

Segment Leq : 47.47 dBA

Total Leq All Segments: 47.47 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.95
(NIGHT): 47.47

Filename: a25001r2.te Time Period: Day/Night 16/8 hours
 Description: R2 day/night at 5th flr

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

```
-----
Car traffic volume : 3409/379    veh/TimePeriod *
Medium truck volume : 53/6       veh/TimePeriod *
Heavy truck volume : 53/6       veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient       : 2 %
Road pavement       : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 3500
Percentage of Annual Growth        : 1.00
Number of Years of Growth          : 11.00
Medium Truck % of Total Volume     : 1.50
Heavy Truck % of Total Volume      : 1.50
Day (16 hrs) % of Total Volume     : 90.00
```

Data for Segment # 1: Dean (day/night)

```
-----
Angle1    Angle2                : -90.00 deg    -60.00 deg
Wood depth                       : 0             (No woods.)
No of house rows                 : 1 / 1
House density                     : 95 %
Surface                           : 1             (Absorptive ground surface)
Receiver source distance         : 32.80 / 32.80 m
Receiver height                  : 13.60 / 13.60 m
Topography                        : 1             (Flat/gentle slope; no barrier)
Reference angle                  : 0.00
```

Road data, segment # 2: Dean (day/night)

```
-----
Car traffic volume : 3409/379    veh/TimePeriod *
Medium truck volume : 53/6       veh/TimePeriod *
Heavy truck volume : 53/6       veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient       : 2 %
Road pavement       : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 3500
Percentage of Annual Growth        : 1.00
Number of Years of Growth          : 11.00
Medium Truck % of Total Volume     : 1.50
Heavy Truck % of Total Volume      : 1.50
Day (16 hrs) % of Total Volume     : 90.00
```

Data for Segment # 2: Dean (day/night)

Angle1 Angle2 : -60.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 32.80 / 32.80 m
Receiver height : 13.60 / 13.60 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: Yonge (day/night)

Car traffic volume : 17753/1973 veh/TimePeriod *
Medium truck volume : 467/52 veh/TimePeriod *
Heavy truck volume : 467/52 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 3.00
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 2.50
Heavy Truck % of Total Volume : 2.50
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 3: Yonge (day/night)

Angle1 Angle2 : 0.00 deg 19.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 251.50 / 251.50 m
Receiver height : 13.60 / 13.60 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 4: Yonge (day/night)

Car traffic volume : 17753/1973 veh/TimePeriod *
Medium truck volume : 467/52 veh/TimePeriod *
Heavy truck volume : 467/52 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 3.00

Number of Years of Growth : 11.00
 Medium Truck % of Total Volume : 2.50
 Heavy Truck % of Total Volume : 2.50
 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 4: Yonge (day/night)

 Angle1 Angle2 : 19.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 1 / 1
 House density : 95 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 251.50 / 251.50 m
 Receiver height : 13.60 / 13.60 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

Results segment # 1: Dean (day)

Source height = 1.11 m

ROAD (0.00 + 32.43 + 0.00) = 32.43 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-60	0.31	56.76	0.00	-4.45	-9.84	0.00	-10.03	0.00	32.43

Segment Leq : 32.43 dBA

Results segment # 2: Dean (day)

Source height = 1.11 m

ROAD (0.00 + 47.27 + 0.00) = 47.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-60	0	0.31	56.76	0.00	-4.45	-5.04	0.00	0.00	0.00	47.27

Segment Leq : 47.27 dBA

Results segment # 3: Yonge (day)

Source height = 1.26 m

ROAD (0.00 + 45.36 + 0.00) = 45.36 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	19	0.00	67.37	0.00	-12.24	-9.77	0.00	0.00	0.00	45.36

Segment Leq : 45.36 dBA

Results segment # 4: Yonge (day)

Source height = 1.26 m

ROAD (0.00 + 38.60 + 0.00) = 38.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
19	90	0.30	67.37	0.00	-15.97	-5.05	0.00	-7.76	0.00	38.60

Segment Leq : 38.60 dBA

Total Leq All Segments: 49.85 dBA

Results segment # 1: Dean (night)

Source height = 1.11 m

ROAD (0.00 + 25.95 + 0.00) = 25.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-60	0.31	50.27	0.00	-4.45	-9.84	0.00	-10.03	0.00	25.95

Segment Leq : 25.95 dBA

Results segment # 2: Dean (night)

Source height = 1.11 m

ROAD (0.00 + 40.78 + 0.00) = 40.78 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-60	0	0.31	50.27	0.00	-4.45	-5.04	0.00	0.00	0.00	40.78

Segment Leq : 40.78 dBA

Results segment # 3: Yonge (night)

Source height = 1.26 m

ROAD (0.00 + 38.84 + 0.00) = 38.84 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	19	0.00	60.85	0.00	-12.24	-9.77	0.00	0.00	0.00	38.84

Segment Leq : 38.84 dBA

Results segment # 4: Yonge (night)

Source height = 1.26 m

ROAD (0.00 + 32.07 + 0.00) = 32.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
19	90	0.30	60.85	0.00	-15.97	-5.05	0.00	-7.76	0.00	32.07

Segment Leq : 32.07 dBA

Total Leq All Segments: 43.35 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 49.85
(NIGHT): 43.35

Filename: a25001r5.te Time Period: Day/Night 16/8 hours
 Description: R5 day/night at 5th flr

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

```
-----
Car traffic volume : 17753/1973 veh/TimePeriod *
Medium truck volume : 467/52 veh/TimePeriod *
Heavy truck volume : 467/52 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 3.00
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 2.50
Heavy Truck % of Total Volume : 2.50
Day (16 hrs) % of Total Volume : 90.00
```

Data for Segment # 1: Yonge (day/night)

```
-----
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 177.30 / 177.30 m
Receiver height : 12.50 / 12.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

Results segment # 1: Yonge (day)

Source height = 1.26 m

ROAD (0.00 + 56.64 + 0.00) = 56.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	67.37	0.00	-10.73	0.00	0.00	0.00	0.00	56.64

Segment Leq : 56.64 dBA

Total Leq All Segments: 56.64 dBA

Results segment # 1: Yonge (night)

Source height = 1.26 m

ROAD (0.00 + 50.12 + 0.00) = 50.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	60.85	0.00	-10.73	0.00	0.00	0.00	0.00	50.12

Segment Leq : 50.12 dBA

Total Leq All Segments: 50.12 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.64
(NIGHT): 50.12

Filename: a25001r6.te Time Period: Day/Night 16/8 hours
Description: R6 day/night at 7th flr

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

Car traffic volume : 3409/379 veh/TimePeriod *
Medium truck volume : 53/6 veh/TimePeriod *
Heavy truck volume : 53/6 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 3500
Percentage of Annual Growth : 1.00
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 1.50
Heavy Truck % of Total Volume : 1.50
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Dean (day/night)

Angle1 Angle2 : 0.00 deg 31.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 96.60 / 96.60 m
Receiver height : 19.00 / 19.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Dean (day/night)

Car traffic volume : 3409/379 veh/TimePeriod *
Medium truck volume : 53/6 veh/TimePeriod *
Heavy truck volume : 53/6 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 3500
Percentage of Annual Growth : 1.00
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 1.50
Heavy Truck % of Total Volume : 1.50
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Dean (day/night)

```

-----
Angle1   Angle2       :   31.00 deg   90.00 deg
Wood depth      :           0       (No woods.)
No of house rows :           1 / 1
House density    :          95 %
Surface         :           1       (Absorptive ground surface)
Receiver source distance : 96.60 / 96.60 m
Receiver height  : 19.00 / 19.00 m
Topography      :           1       (Flat/gentle slope; no barrier)
Reference angle  :           0.00
  
```

Road data, segment # 3: Yonge (day/night)

```

-----
Car traffic volume : 17753/1973 veh/TimePeriod *
Medium truck volume : 467/52 veh/TimePeriod *
Heavy truck volume : 467/52 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement     : 1 (Typical asphalt or concrete)
  
```

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

```

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth       : 3.00
Number of Years of Growth         : 11.00
Medium Truck % of Total Volume    : 2.50
Heavy Truck % of Total Volume     : 2.50
Day (16 hrs) % of Total Volume    : 90.00
  
```

Data for Segment # 3: Yonge (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   0.00 deg
Wood depth      :           0       (No woods.)
No of house rows :           0 / 0
Surface         :           2       (Reflective ground surface)
Receiver source distance : 187.80 / 187.80 m
Receiver height  : 19.00 / 19.00 m
Topography      :           1       (Flat/gentle slope; no barrier)
Reference angle  :           0.00
  
```

Results segment # 1: Dean (day)

Source height = 1.11 m

ROAD (0.00 + 39.81 + 0.00) = 39.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	31	0.15	56.76	0.00	-9.28	-7.67	0.00	0.00	0.00	39.81

Segment Leq : 39.81 dBA

Results segment # 2: Dean (day)

Source height = 1.11 m

ROAD (0.00 + 33.11 + 0.00) = 33.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
31	90	0.15	56.76	0.00	-9.28	-5.46	0.00	-8.91	0.00	33.11

Segment Leq : 33.11 dBA

Results segment # 3: Yonge (day)

Source height = 1.26 m

ROAD (0.00 + 53.38 + 0.00) = 53.38 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	67.37	0.00	-10.98	-3.01	0.00	0.00	0.00	53.38

Segment Leq : 53.38 dBA

Total Leq All Segments: 53.61 dBA

Results segment # 1: Dean (night)

Source height = 1.11 m

ROAD (0.00 + 33.33 + 0.00) = 33.33 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	31	0.15	50.27	0.00	-9.27	-7.67	0.00	0.00	0.00	33.33

Segment Leq : 33.33 dBA

Results segment # 2: Dean (night)

Source height = 1.11 m

ROAD (0.00 + 26.63 + 0.00) = 26.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
31	90	0.15	50.27	0.00	-9.27	-5.46	0.00	-8.91	0.00	26.63

Segment Leq : 26.63 dBA

Results segment # 3: Yonge (night)

Source height = 1.26 m

ROAD (0.00 + 46.86 + 0.00) = 46.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	60.85	0.00	-10.98	-3.01	0.00	0.00	0.00	46.86

Segment Leq : 46.86 dBA

Total Leq All Segments: 47.09 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.61
(NIGHT): 47.09

Filename: a25001r8.te Time Period: Day/Night 16/8 hours
 Description: R8 day/night at 5th flr

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

```
-----
Car traffic volume : 3409/379    veh/TimePeriod    *
Medium truck volume : 53/6       veh/TimePeriod    *
Heavy truck volume : 53/6       veh/TimePeriod    *
Posted speed limit : 40 km/h
Road gradient       : 2 %
Road pavement       : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 3500
Percentage of Annual Growth        : 1.00
Number of Years of Growth          : 11.00
Medium Truck % of Total Volume     : 1.50
Heavy Truck % of Total Volume       : 1.50
Day (16 hrs) % of Total Volume      : 90.00
```

Data for Segment # 1: Dean (day/night)

```
-----
Angle1    Angle2                : 0.00 deg    90.00 deg
Wood depth                       : 0            (No woods.)
No of house rows                 : 0 / 0
Surface                           : 1            (Absorptive ground surface)
Receiver source distance         : 32.10 / 32.10 m
Receiver height                  : 14.40 / 14.40 m
Topography                        : 1            (Flat/gentle slope; no barrier)
Reference angle                  : 0.00
```

Road data, segment # 2: Yonge (day/night)

```
-----
Car traffic volume : 17753/1973   veh/TimePeriod    *
Medium truck volume : 467/52       veh/TimePeriod    *
Heavy truck volume : 467/52       veh/TimePeriod    *
Posted speed limit : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth        : 3.00
Number of Years of Growth          : 11.00
Medium Truck % of Total Volume     : 2.50
Heavy Truck % of Total Volume       : 2.50
Day (16 hrs) % of Total Volume      : 90.00
```

Data for Segment # 2: Yonge (day/night)

```

-----
Angle1   Angle2       : -90.00 deg    0.00 deg
Wood depth      :      0      (No woods.)
No of house rows :      0 / 0
Surface         :      2      (Reflective ground surface)
Receiver source distance : 252.30 / 252.30 m
Receiver height  :   14.40 / 14.40 m
Topography       :      1      (Flat/gentle slope; no barrier)
Reference angle  :      0.00
  
```

Results segment # 1: Dean (day)

Source height = 1.11 m

ROAD (0.00 + 48.76 + 0.00) = 48.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.28	56.76	0.00	-4.25	-3.75	0.00	0.00	0.00	48.76

Segment Leq : 48.76 dBA

Results segment # 2: Yonge (day)

Source height = 1.26 m

ROAD (0.00 + 52.10 + 0.00) = 52.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	67.37	0.00	-12.26	-3.01	0.00	0.00	0.00	52.10

Segment Leq : 52.10 dBA

Total Leq All Segments: 53.75 dBA

Results segment # 1: Dean (night)

Source height = 1.11 m

ROAD (0.00 + 42.28 + 0.00) = 42.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.28	50.27	0.00	-4.24	-3.75	0.00	0.00	0.00	42.28

Segment Leq : 42.28 dBA

Results segment # 2: Yonge (night)

Source height = 1.26 m

ROAD (0.00 + 45.58 + 0.00) = 45.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	60.85	0.00	-12.26	-3.01	0.00	0.00	0.00	45.58

Segment Leq : 45.58 dBA

Total Leq All Segments: 47.25 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.75
(NIGHT): 47.25

Filename: a25001r9.te Time Period: 16 hours
 Description: R9 POPS

Road data, segment # 1: Dean

```
-----
Car traffic volume : 3409 veh/TimePeriod *
Medium truck volume : 53 veh/TimePeriod *
Heavy truck volume : 53 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)
```

Data for Segment # 1: Dean

```
-----
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 16.80 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

Results segment # 1: Dean

Source height = 1.11 m

ROAD (0.00 + 54.48 + 0.00) = 54.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	56.76	0.00	-0.82	-1.46	0.00	0.00	0.00	54.48

Segment Leq : 54.48 dBA

Total Leq All Segments: 54.48 dBA

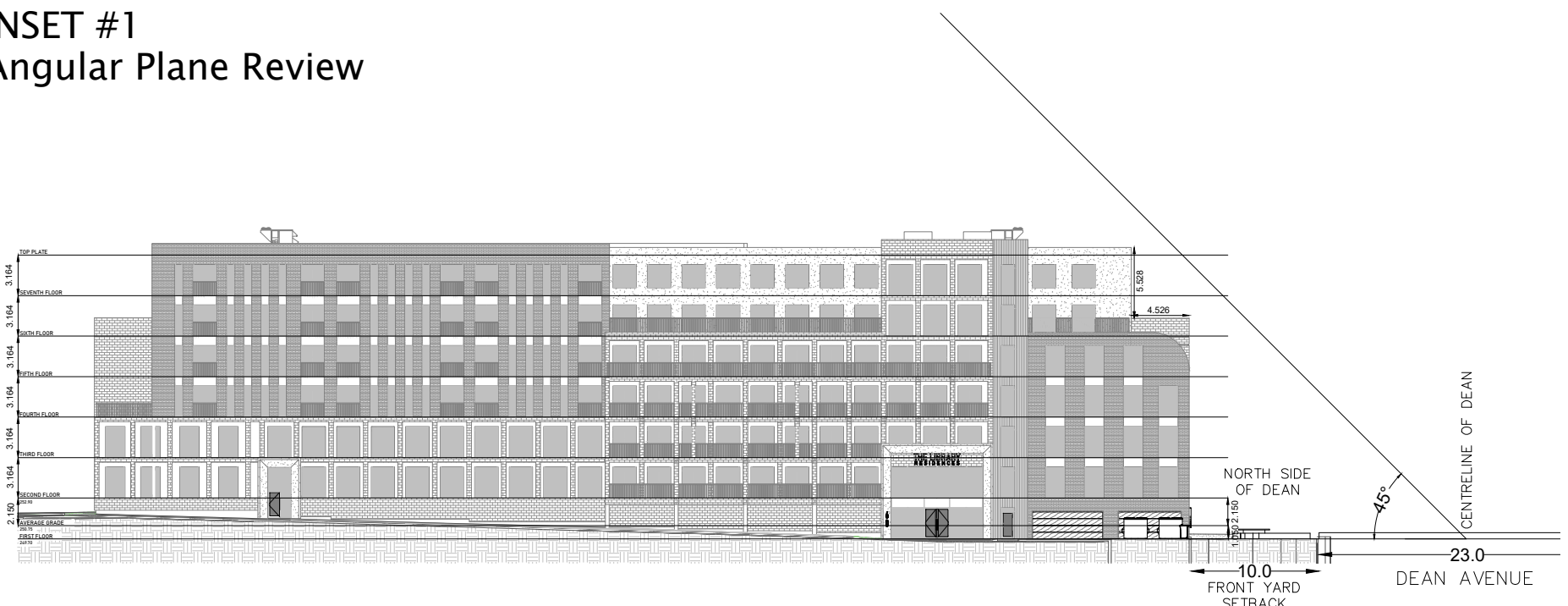
TOTAL Leq FROM ALL SOURCES: 54.48

APPENDIX 'C'

BACKGROUND SITE PLAN AND ARCHITECTURAL PLANS

G:\Planning Drawings\PRA-24067-CP-9K.dwg Submitted\FEB 2025\PRA-24067-CP-9K.dwg Layout:CP Plotted Feb 27, 2025 @ 9:12am by morichords The Jones Consulting Group Ltd.

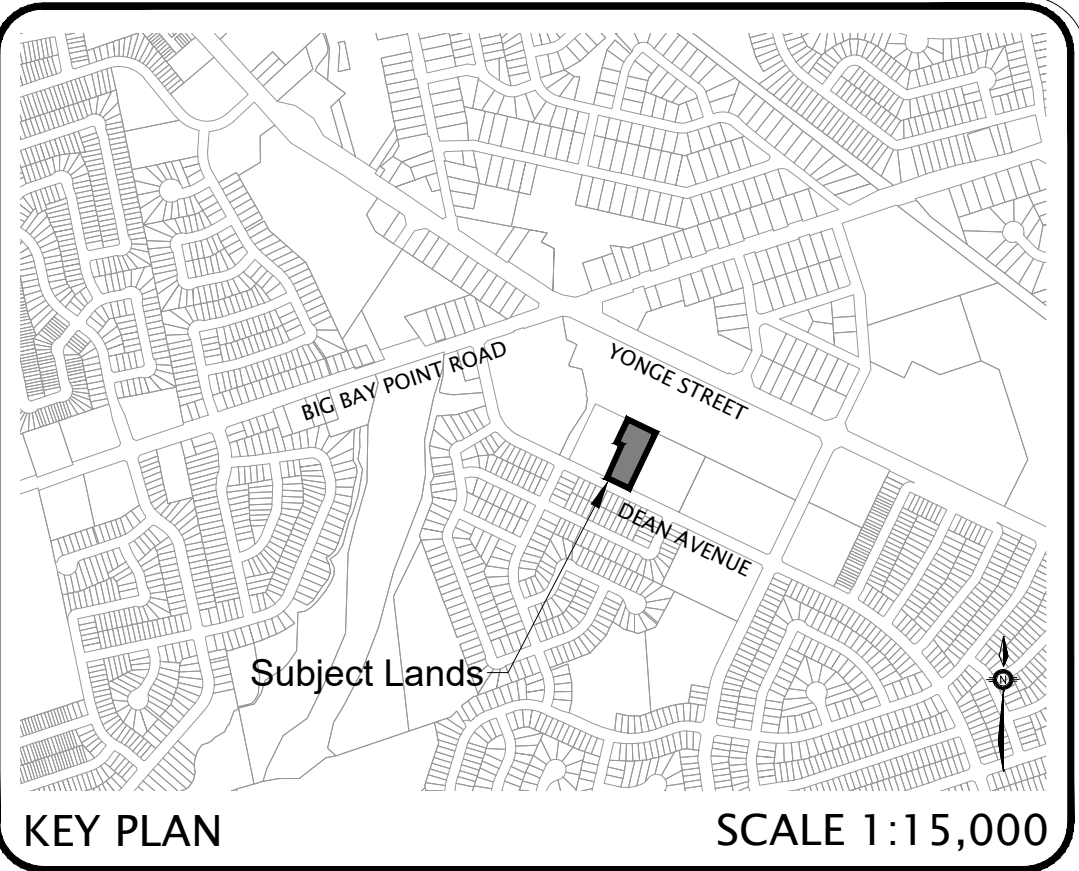
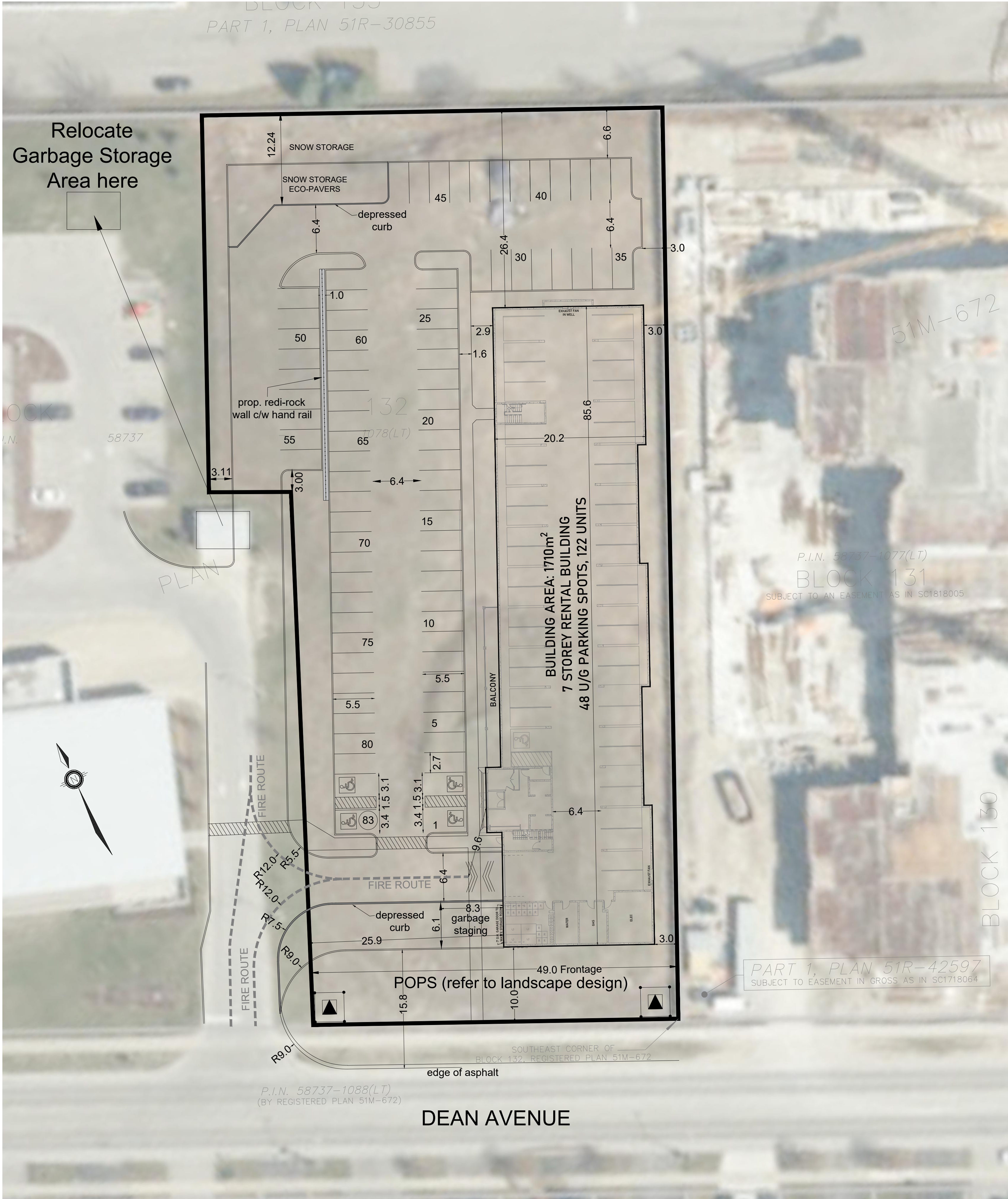
INSET #1
Angular Plane Review



ANGULAR PLANE REVIEW

(1:500)
TJCG - FEB.26/2025

60 DEAN AVENUE
CITY OF BARRIE



Site Plan
60 Dean Avenue
Part of Lot 13
Concession 12

City of Barrie
2025

SITE PLAN STATISTICS
Zone Provision for Residential (Apartment) Zone (Bill No. 051)
(RA2-1)(SP-658)(H-164)

Subject Lands - 6670 m² (PART 2)

7 Storey Apartment Building - 122 units
1712 m² - footprint
8,809 m² - GFA

	REQUIRED	PROVIDED
Lot Area	1300 m ²	6670 m ²
Lot Frontage (min.)	30.0 m	49.0 m
Front Yard (min.)	9.0 m	10.0 m
Interior Side Yard (min.)	3.0 m	3.0 m
Rear Yard	3.0 m	26.4 m
Lot Coverage (max.)	57% / 3802 m ²	26% / 1712 m ²
Gross Floor Area (min.)	209% / 13940 m ²	132% / 8,809 m ² *
Height (max.)	36.0 m	21.8 m
Parking Coverage (max.)	35% / 2335 m ²	35% / 2317 m ²
Landscape Buffer	3.0 m	3.0 m
Landscape Open Space (min.)	35% / 2335 m ²	32% / 2166 m ² *
Angular Plane	45 degree	Please refer to inset #1

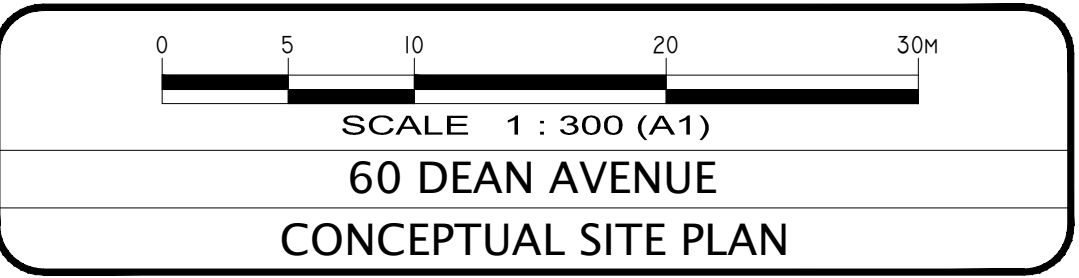
Parking Details		
Apartment	98 spaces (0.8/unit)	131 spaces (1.07/unit)

- Parking Provision Breakdown
- Typical Street Level Spaces - 79
 - Barrier Free Spaces - 5 (1 underground)
 - Underground Typical Spaces - 47
 - Total - 131 Spaces

Barrier Free 4 spaces 5 spaces

Fire Route - - - - -

Notes
- * This symbol indicates a minor variance is required.



Raymond J. Duhamel
REGISTERED PROFESSIONAL PLANNER
R.P.P.

Date Issued:	FEB. 27, 2025
Checked By:	RD
Project No.:	PRA-24067
Drawn By:	m.c.r.
Drawing Name:	PRA-24067-CP-9K.dwg

JONES
CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Drive East, Unit 1, Barrie, Ontario, L4N 6W5
Phone: 705-734-2538 Fax: 705-734-1056
www.jonesconsulting.com

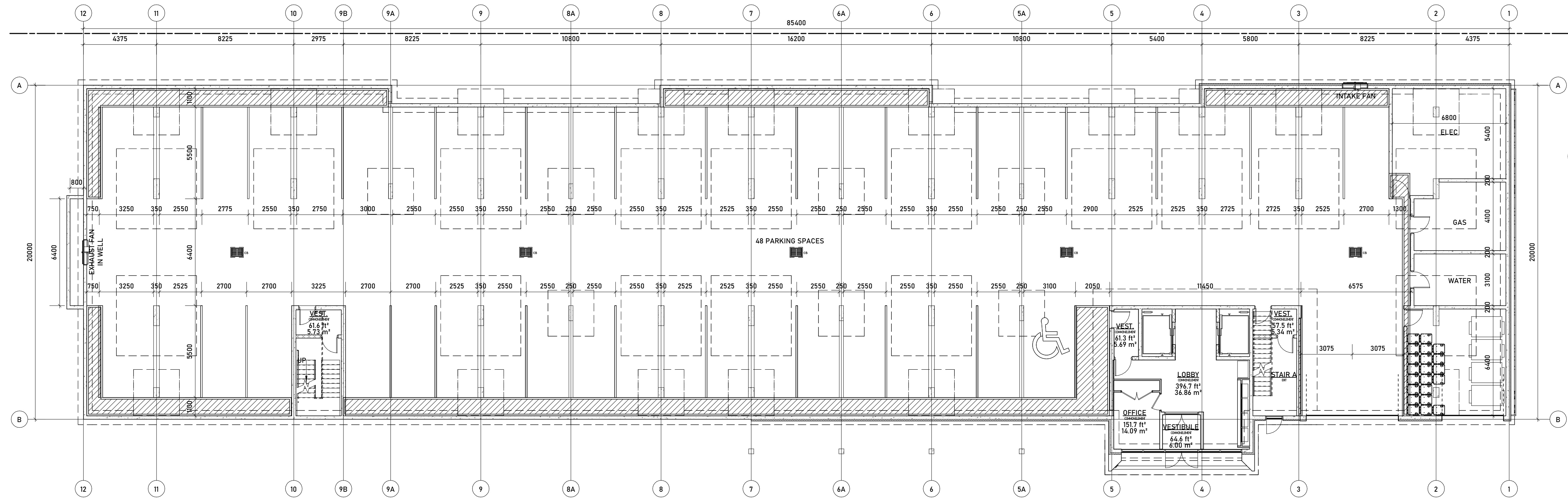


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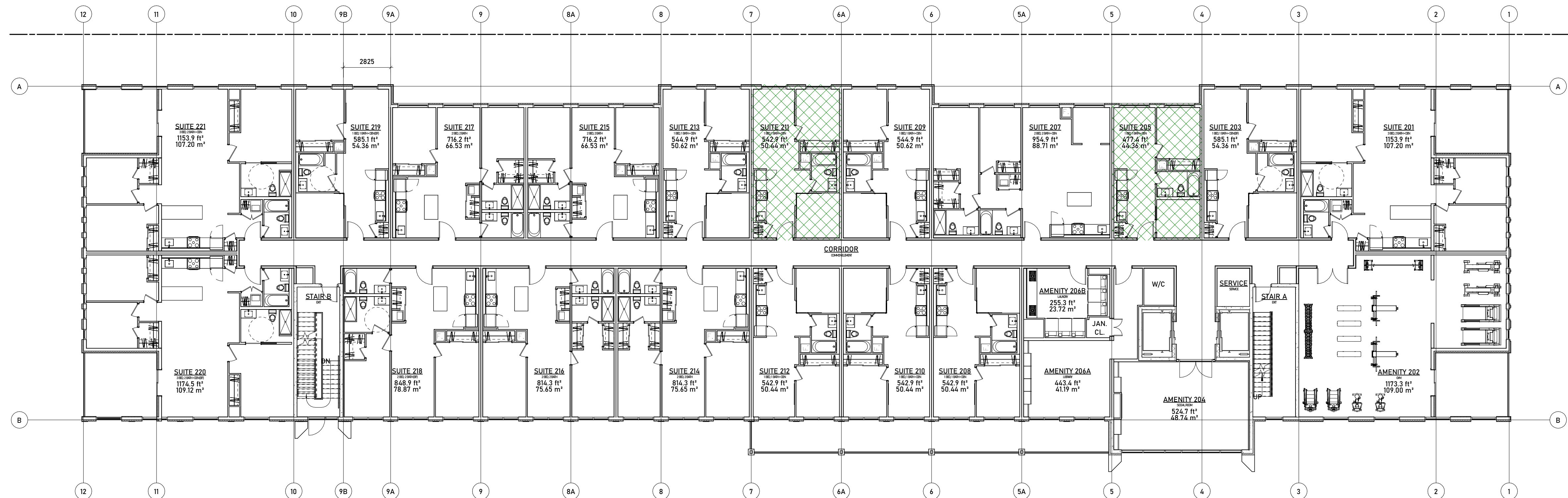
60 DEAN AVENUE, BARRIE, ONTARIO

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ARCHITECTS
Inc.



FIRST FLOOR
SCALE: 1:150



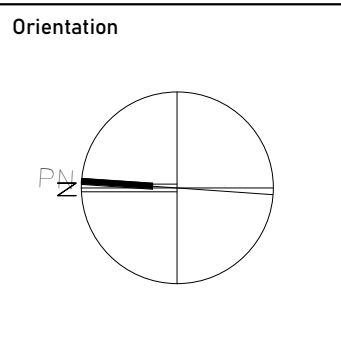
SECOND FLOOR
SCALE: 1:150

AREAS		AREAS	
AMENITY 202	109 m ²	SUITE 201	107.2 m ²
AMENITY 204	48.74 m ²	SUITE 203	54.36 m ²
AMENITY 204A	41.19 m ²	SUITE 205	44.36 m ²
AMENITY 204B	23.72 m ²	SUITE 207	88.71 m ²
CORRIDOR	118.55 m ²	SUITE 208	50.44 m ²
SUITE 201	107.2 m ²	SUITE 209	50.42 m ²
SUITE 203	54.36 m ²	SUITE 210	50.44 m ²
SUITE 205	44.36 m ²	SUITE 211	50.44 m ²
SUITE 207	88.71 m ²	SUITE 212	50.44 m ²
SUITE 208	50.44 m ²	SUITE 213	50.42 m ²
SUITE 209	50.62 m ²	SUITE 214	75.65 m ²
SUITE 210	50.44 m ²	SUITE 215	66.53 m ²
SUITE 211	50.44 m ²	SUITE 216	75.65 m ²
SUITE 212	50.44 m ²	SUITE 217	66.53 m ²
SUITE 213	50.62 m ²	SUITE 218	78.87 m ²
SUITE 214	75.65 m ²	SUITE 219	54.36 m ²
SUITE 215	66.53 m ²	SUITE 220	109.12 m ²
SUITE 216	75.65 m ²	SUITE 221	107.2 m ²
SUITE 217	66.53 m ²	TOTAL LEASABLE IT*	1231.53 m ²
SUITE 218	78.87 m ²		
SUITE 219	54.36 m ²		
SUITE 220	109.12 m ²		
SUITE 221	107.2 m ²		
TOTAL GROSS IT*	1572.75 m ²		

ISM ARCHITECTS Inc.

97 Toronto Street
5th Floor
Tel: 705-726-2342
Email: ian@ismarchitects.ca
Website: www.ismarchitects.ca

#	Description	Date
1	INITIAL MASSING	DEC 16/24
2	CLIENT REVIEW	JAN 01/25
3	MEETING UPDATE	JAN 13/25
4	ISSUE FOR STRUCT	JAN 17/25
5	FOOTPRINT REVISION	JAN 23/25
6	UNIT REVIEW	JAN 29/25
7	ISSUE FOR CONDO	FEB 20/25
8	ISSUE FOR SUBMISSION	MAR 04/25



Client Information
PRATT HOMES

Project
THE LIBRARY
RESIDENCES
60 DEAN AVE, BARRIE

Project Information
Project No.: 23-4376
Drawn by: JB
Checked by: ISM
Date: DEC 16, 2024
Scale: 1:150

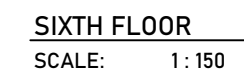
Drawing
FIRST
PARKING &
SECOND
FLOOR PLAN

Drawing No.

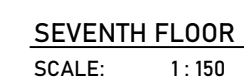
A200

AREAS		AREAS	
CORRIDOR	118.5 m²	SUITE 401	107.2 m²
SUITE 401	107.2 m²	SUITE 402	109.01 m²
SUITE 402	109.01 m²	SUITE 403	54.36 m²
SUITE 403	54.36 m²	SUITE 404	45.78 m²
SUITE 404	45.78 m²	SUITE 405	44.36 m²
SUITE 405	44.36 m²	SUITE 406	50.44 m²
SUITE 406	50.44 m²	SUITE 407	88.71 m²
SUITE 407	88.71 m²	SUITE 408	50.44 m²
SUITE 408	50.44 m²	SUITE 409	50.62 m²
SUITE 409	50.62 m²	SUITE 410	50.62 m²
SUITE 410	50.44 m²	SUITE 411	50.44 m²
SUITE 411	50.44 m²	SUITE 412	50.44 m²
SUITE 412	50.44 m²	SUITE 413	50.62 m²
SUITE 413	50.62 m²	SUITE 414	75.65 m²
SUITE 414	75.65 m²	SUITE 415	65.53 m²
SUITE 415	65.53 m²	SUITE 416	75.65 m²
SUITE 416	75.65 m²	SUITE 417	65.53 m²
SUITE 417	65.53 m²	SUITE 418	78.87 m²
SUITE 418	78.87 m²	SUITE 419	54.36 m²
SUITE 419	54.36 m²	SUITE 420	109.12 m²
SUITE 420	109.12 m²	SUITE 421	107.2 m²
SUITE 421	107.2 m²	TOTAL LEASABLE ft²	1436.76 m²
TOTAL GROSS ft²	1555.26 m²		



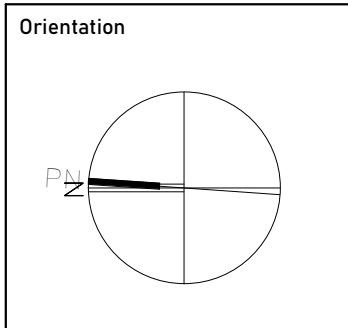


AREAS	
CORRIDOR	118.5 m ²
SUITE 601	70.9 m ²
SUITE 602	72.49 m ²
SUITE 603	47.64 m ²
SUITE 604	45.97 m ²
SUITE 605	44.36 m ²
SUITE 606	44.36 m ²
SUITE 607	88.71 m ²
SUITE 608	44.36 m ²
SUITE 609	50.62 m ²
SUITE 610	44.36 m ²
SUITE 611	50.44 m ²
SUITE 612	44.36 m ²
SUITE 613	50.62 m ²
SUITE 614	75.84 m ²
SUITE 615	66.53 m ²
SUITE 616	75.65 m ²
SUITE 617	66.53 m ²
SUITE 618	78.87 m ²
SUITE 619	47.64 m ²
SUITE 620	81.92 m ²
SUITE 621	70.91 m ²
TOTAL 4 th	1389.55 m ²



AREAS	
CORRIDOR	118.5 m ²
SUITE 701	70.9 m ²
SUITE 702	72.49 m ²
SUITE 703	47.64 m ²
SUITE 704	45.97 m ²
SUITE 705	44.36 m ²
SUITE 706	88.71 m ²
SUITE 707	88.71 m ²
SUITE 709	50.62 m ²
SUITE 710	44.36 m ²
SUITE 711	50.44 m ²
SUITE 712	44.36 m ²
SUITE 713	50.44 m ²
SUITE 714	75.84 m ²
SUITE 715	66.53 m ²
SUITE 716	75.45 m ²
SUITE 717	66.53 m ²
SUITE 718	78.87 m ²
SUITE 719	47.64 m ²
SUITE 720	82.02 m ²
SUITE 721	70.9 m ²
TOTAL #1	1381.65 m ²

97 Toronto Street
Barrie, ON, L4N 1V1
Tel: 705-726-2342
Email: ian@ismarchitects.ca
Website: www.ismarchitects.ca

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Client Information
PRATT HOMES

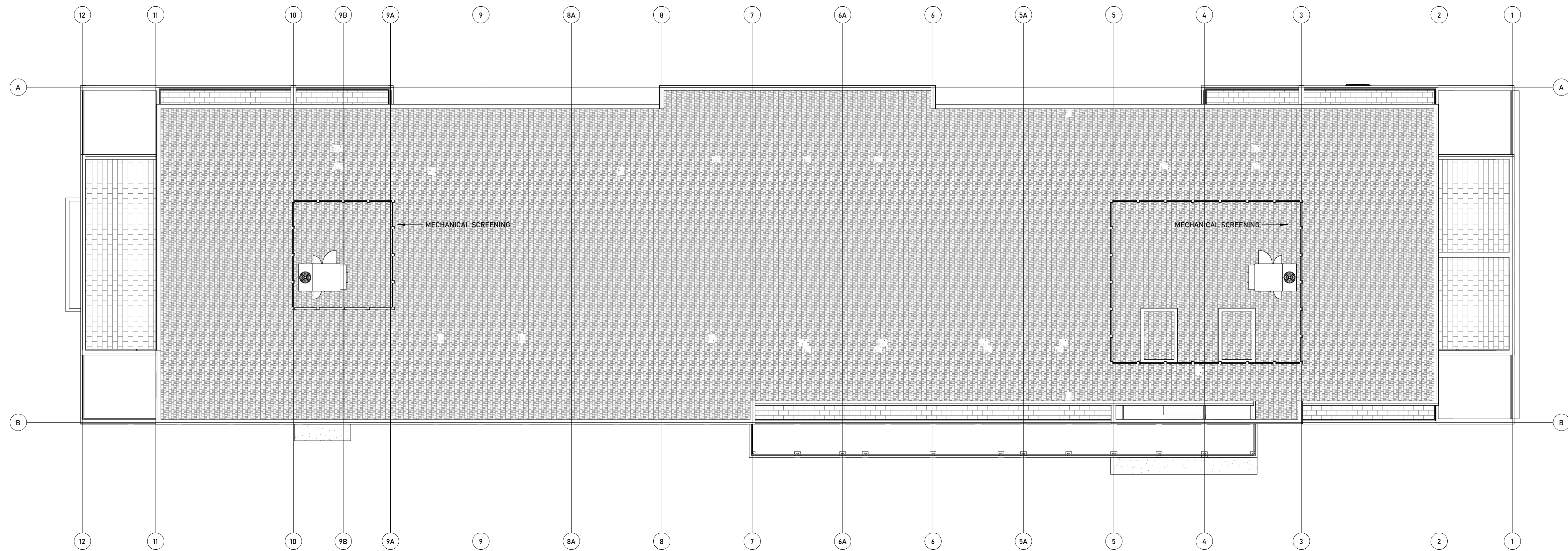
Project
THE LIBRARY
RESIDENCES
60 DEAN AVE, BARRIE

Project Information	
Project No.:	23-4376
Drawn by:	JB
Checked by:	ISM
Date:	DEC 16, 2024
Scale:	1 : 150

Drawing

**SIXTH &
SEVENTH
FLOOR PLAN**

Drawing No.

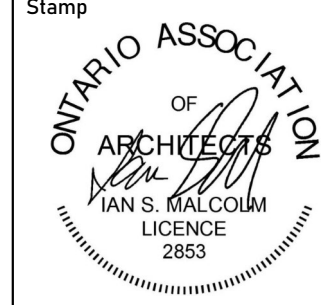


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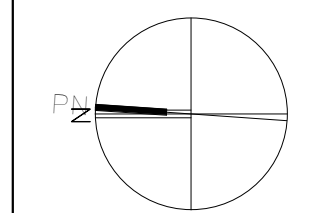
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Barrie, ON, L4N 1V1
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[illegible]

Stamp



Orientation



Client Information

PRATT HOMES

Project
THE LIBRARY
RESIDENCES
60 DEAN AVE, BARRIE

Project Information

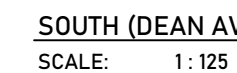
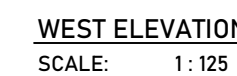
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 Drawn by: JB
 Checked by: ISM
 Date: DEC 16, 2024
 Scale: 1 : 150

Drawing

ROOF PLAN

Drawing No.

A203



[illegible]



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97 Toronto Street
Barrie, ON, L4N 1V1
Tel: 705-726-2342
Email: ian@ismarchitects.ca
Website: www.ismarchitects.ca

Description	Date
INITIAL MASSING	DEC 16/24
CLIENT REVIEW	JAN 01/25
MEETING UPDATE	JAN 13/25
ISSUE FOR STRUCT.	JAN 17/25
FOOTPRINT REDESIGN	JAN 23/25
UNIT REVIEW	JAN 29/25
ISSUE FOR COORD.	FEB 28/25
ISSUE FOR SUBMISSION	MAR 04/25

[illegible]

Stamp



Orientation

Client Information

PRATT HOMES

roject

THE LIBRARY
RESIDENCES
50 DEAN AVE, BARRIE

Project Information

Project No.: 23-4376
Drawn by: JB
Checked by: ISM
Date: DEC 16, 2024
Scale: As indicated

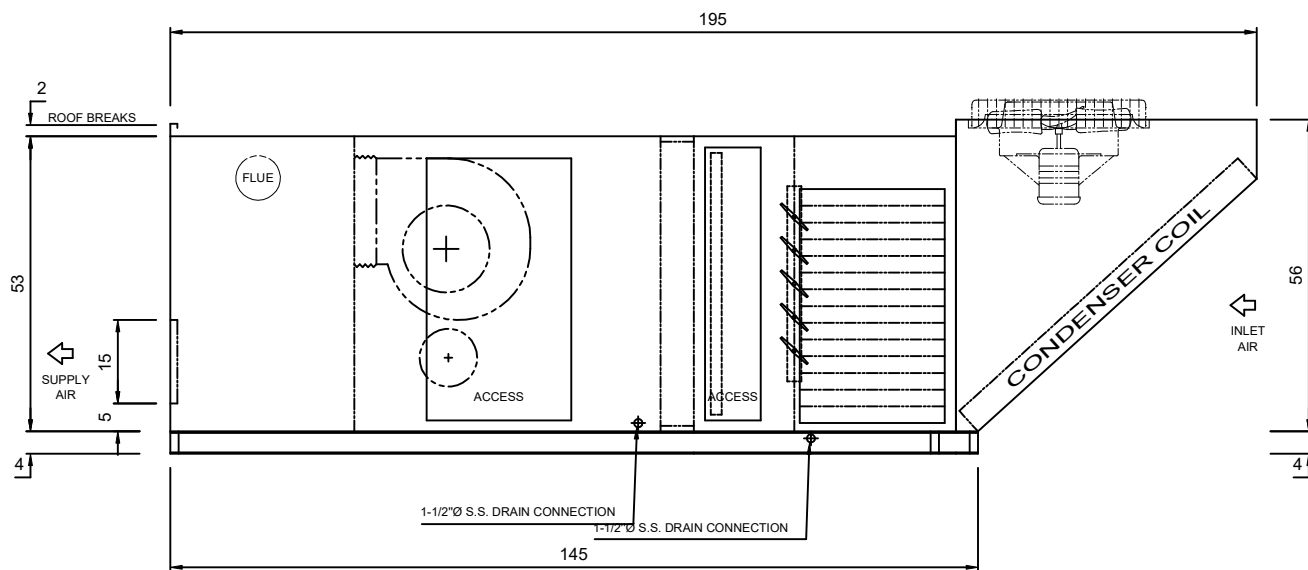
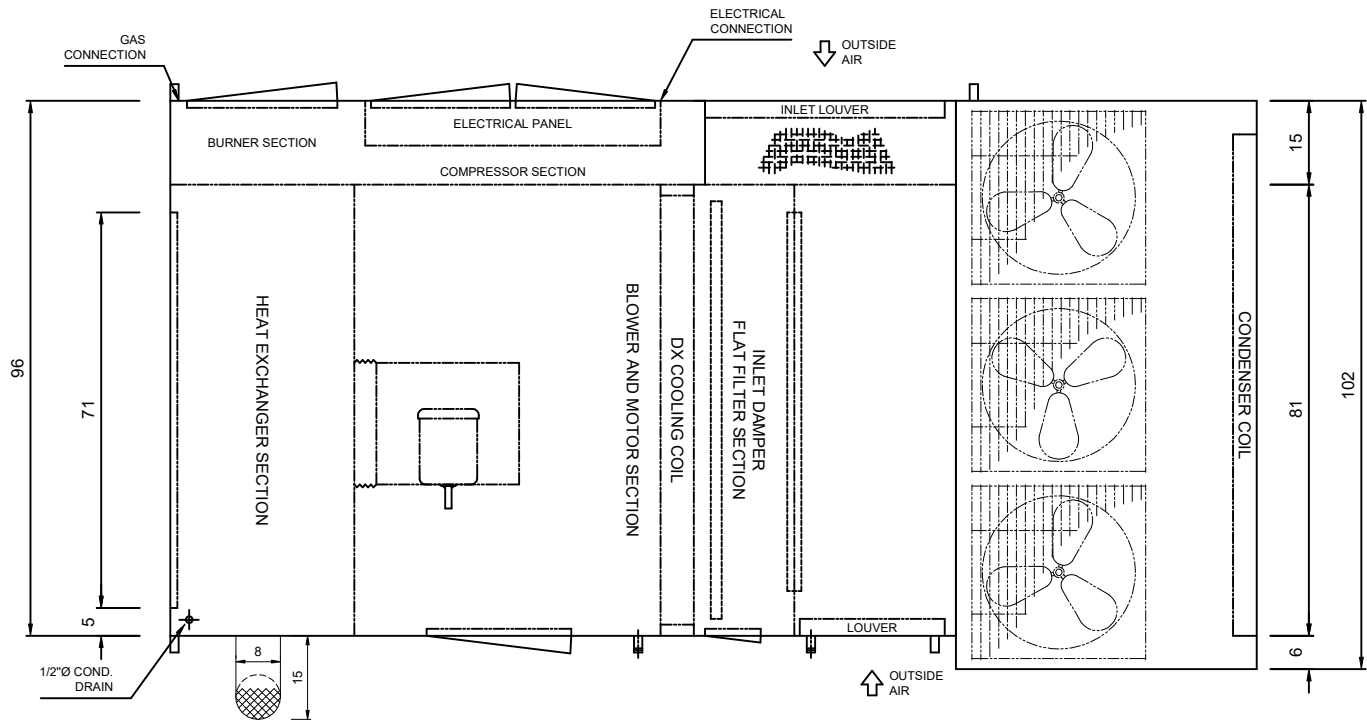
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ELEVATIONS

Drawing No

A301

APPENDIX 'D'
BACKGROUND HVAC AND
MECHANICAL DATA



ESTIMATED Total unit Weight = 6,938 lbs (SUBJECT TO CHANGE)

DOOR SIZES AND INTERNAL COMPONENTS ARE APPROX. VALUES. DIMENSIONS SHOWN IN INCHES ONLY UNLESS OTHERWISE NOTED.

TAG: MUA-1

PRELIMINARY DRAWING ONLY - NOT FOR CONSTRUCTION.

FWE183/DJX100

EngA

ENGINEERED AIR

generated by
ProUnit

REVISIONS:

DATE:
JAN 21 2025

DRWN BY:
-

CHKD BY:
-

DRWG NO.:

**ENGINEERED AIR**

Unit Sound Data

UNIT S/A OUTLET:

CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000	A-weighted
SOUND POWER Lw (dB)	90.9	95.0	92.0	89.0	88.0	86.0	82.4	80.4	93.3

UNIT O/A INLET:

CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000	A-weighted
SOUND POWER Lw (dB)	94.0	95.0	92.0	89.0	88.0	86.0	83.0	81.0	93.4

UNIT CASING *:

CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000	A-weighted
SOUND POWER Lw (dB)	85.4	88.7	83.4	83.8	84.5	79.3	79.1	71.2	88.2

* Unit casing sound includes casing breakout and sound sources outside the air streams only. Sound from openings are not included in unit casing sound.

Note:

Unit sound data are calculated for the specified unit construction and operating condition as shown above.

Project Name: **60 Dean- Trace Engg**

Unit Tag: **150tons plus**

Qty.: **1**

Model: **YLAA0170SJ58XF**

Full Load - Design

PIN

YLAA0170SJ	58XFBSDTXH	SXBLXCXX42	XEXXXHXXX	YUXGTXXXBX	XMGXXXXXXX			
...5...10	...5...20	...5...30	...5...40	...5...50	...5...60	...5...70	...5...80	...5...90

Unit	
Model No.	YLAA0170SJ58XFB
Number of Compressors	6
Compressor Type	Scroll - Hermetic
Number of Compressor Circuits	2
Refrigerant	R454B
Performance Data	
Cooling Capacity [tons.R]	163.7
Total Power Input [kW]	201.2
EER [Btu/W.h]	9.763
NPLV.IP [Btu/W.h]	17.15
A-Weighted Sound Power [dB(A)]	93.0
Sound Pressure (Hemispherical Method) [dB(A)]	63.0
Sound Pressure Measured at [ft]	30.0
Electrical Data	
Nominal Voltage / Voltage Limits	575/3/60 / 517-633
Compressor RLA (each circuit) [A]	42.5 / 42.5 / 42.5 / 42.5 / 42.5 / 42.5
High LRA Current (each circuit) [A]	255.0 / 255.0 / 255.0 / 255.0 / 255.0 / 255.0
Fan QTY (each circuit)	5 / 5
Fan FLA (each circuit) [A]	2.9 / 2.9
Min. Circuit Ampacity [A]	298.0
Recommended Fuse / CB Rating [A]	300.0
Max. Inverse Time CB Rating [A]	300.0
Max. Dual Element Fuse Size [A]	300.0
Unit Short Circuit Withstand [kA]	5 kA
Wires Per Phase	2 + 1
Wire Range (Lug Size)	#3/0 AWG - 250 kcmil + 250 - 500 kcmil
Compressor kW	184.4



Performance Impacting Options

Starter Type	Across the line starter
Power Factor Correction Capacitor	No Power Capacitor required
Remote Evaporator	Standard Cooler required
Sound Kit	Acoustic Blanket Required
Fan	Ultra Quiet Fans with VSD

Weight & Dimensional Data

Shipping Weight [lbs]	7904
Operating Weight [lbs]	7987
Refrigerant Charge [lbs]	149
Length [in]	232.7
Width [in]	88.3
Height [in]	94.2



Performance Report

Performance Specification

Page 2 of 4

Project Name: **60 Dean- Trace Engg**Unit Tag: **150tons plus**Qty.: **1**Model: **YLAA0170SJ58XF**

Heat Exchanger Performance

Evaporator		Condenser (Air Cooled)	
Heat Exchanger Type	Plate Heat Exchanger	Ambient Air Temperature* [°F]	95.0
Entering Fluid Temperature* [°F]	54.00	Altitude* [ft]	0.00
Leaving Fluid Temperature* [°F]	42.00	Condensing Temperature [°F]	120.97 / 120.97
Flow Rate [USGPM]	325.5	Number of Fans	5 / 5
Fouling Factor* [h ft ² F/Btu]	0.000100	Total Air Flow [cfm]	150000
Fluid Type*	Water	Total Fan Power [kW]	16.80
Fluid Volume [USGAL]	10.0		
Evaporating Temperature [°F]	35.65		
Evaporator Pressure Drop [ft H ₂ O]	14.6		
Strainer Pressure Drop [ft H ₂ O]	2.80		
Extension Kit Pressure Drop [ft H ₂ O]	6.47		
Total Pressure Drop [ft H ₂ O]	23.8		
Fluid Connection Diameter [in]	4		
Minimum Flow Rate [USGPM]	150.0		
Maximum Flow Rate [USGPM]	625.0		

* Designates user specified input

Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Using Vapor Compression Cycle Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org.



Part Load Performance (Based on Standard AHRI Unloading)

Percent Load	Ambient [°F]	Capacity [tons.R]	Power Input [kW]	Unit Efficiency [Btu/W.h]
100.0	95.0	163.7	201.2	9.763
75.8	80.1	124.1	107.3	13.88
56.9	80.1	93.20	77.29	14.47
61.7	65.1	101.1	66.83	18.15
41.4	65.1	67.76	41.48	19.60
43.6	55.0	71.32	38.02	22.51
20.9	55.0	34.23	18.44	22.28

Project Name: **60 Dean- Trace Engg**

Unit Tag: **150tons plus**

Qty.: **1**

Model: **YLAA0170SJ58XF**

Sound Power Levels (In Accordance with AHRI 370)

Percent Load	Ambient [°F]	Octave Band Center Frequency [Hz]								LWA
		63	125	250	500	1000	2000	4000	8000	
100.0	95.0	96.0	95.0	91.0	91.0	88.0	84.0	81.0	79.0	93.0
75.8	80.1	92.0	91.0	87.0	88.0	84.0	80.0	77.0	75.0	89.0
56.9	80.1	90.0	89.0	85.0	85.0	82.0	78.0	75.0	73.0	87.0
61.7	65.1	90.0	89.0	85.0	85.0	82.0	78.0	75.0	73.0	87.0
41.4	65.1	85.0	83.0	80.0	81.0	78.0	74.0	71.0	70.0	83.0
43.6	55.0	85.0	83.0	80.0	81.0	78.0	74.0	71.0	70.0	83.0
20.9	55.0	82.0	80.0	77.0	78.0	75.0	71.0	68.0	67.0	80.0

Note: Unit is equipped with Acoustic Blanket Required and Ultra Quiet Fans with VSD.

Measurement of sound pressure used to obtain the sound power data presented is based on AHRI-370.

Air-cooled chillers are rated in terms of sound power not sound pressure. Johnson Controls provides estimates of sound pressure, but this is not the rating metric.

For an air-cooled chiller, sound pressure calculated from sound power varies depending on how the chiller is assumed to behave, i.e. the radiation model. In other words, determining sound pressure from sound power requires making assumptions that result in different answers at a given distance from the chiller. The environment also influences sound pressure in the field installation. Sound pressure estimation radiation models pertaining to air-cooled chillers include the 'traditional' hemispherical model, parallelepiped model and equivalent hemispherical model.

Regarding sound power, Johnson Controls references tolerance limits based on ASHRAE guidelines. These are +/- 6dB in the 63Hz octave band, +/- 4dB in all other octave bands and +/- 3dB for the overall dBA.

Tolerance limits are based on uncertainties associated with:

1. Measurement Test Procedure
2. Repeatability
3. Production / Manufacturing Variability

Standard deviation associated with air-cooled chiller sound data is a measure of spread i.e. it indicates the range of probability of sound levels. Note that for operating conditions other than AHRI's Standard Rating Condition, higher levels of uncertainty can be expected.

Lead times for factory performance testing depend on test laboratory availability. Please confirm with Johnson Controls Customer Service.

Percent Load	Ambient [°F]	Octave Band Center Frequency [Hz]								LpA
		63	125	250	500	1000	2000	4000	8000	
100.0	95.0	67.0	65.0	62.0	62.0	58.0	54.0	51.0	49.0	63.0
75.8	80.1	63.0	61.0	58.0	58.0	55.0	51.0	47.0	46.0	60.0
56.9	80.1	61.0	59.0	56.0	56.0	53.0	49.0	45.0	44.0	58.0
61.7	65.1	61.0	59.0	56.0	56.0	53.0	49.0	45.0	44.0	58.0
41.4	65.1	56.0	54.0	51.0	51.0	49.0	45.0	41.0	40.0	53.0
43.6	55.0	56.0	54.0	51.0	51.0	49.0	45.0	41.0	40.0	53.0
20.9	55.0	53.0	51.0	48.0	48.0	46.0	42.0	38.0	37.0	50.0



Performance Report

Performance Specification

Page 4 of 4

Project Name: 60 Dean- Trace Engg

Unit Tag: 150tons plus

Qty.: 1

Model: YLAA0170SJ58XF

Performance at AHRI Conditions

Evaporator		Condenser	
EFT [°F]	54.00	Ambient Temp. [°F]	95.0
LFT [°F]	44.00	Altitude [ft]	0.00
Flow Rate [USGPM]	400.0	Performance	
Pressure Drop [ft H2O]	21.4	EER [Btu/W.h]	9.942
Fluid Type	Water	IPLV.IP [Btu/W.h]	17.49
Fouling Factor [h ft2 F/Btu]	0.000100	Net Cooling Capacity [tons.R]	167.6
Fluid Volume [USGAL]	10.0		

Note:Unit rated at design condition capacity.

Part Load Performance (Based on AHRI 550/590 - 2023 (IP))

Percent Load	Ambient [°F]	Capacity [tons.R]	Power Input [kW]	Unit Efficiency [Btu/W.h]
100.0	95.0	167.6	202.3	9.942
75.8	80.0	127.1	107.8	14.15
56.9	80.0	95.33	77.60	14.74
61.7	65.0	103.4	67.13	18.49
41.4	65.0	69.41	41.66	19.99
43.6	55.0	72.98	38.28	22.88
21.0	55.0	35.25	18.59	22.75

Notes:

Country of Origin:Mexico

Min flow rate is for chillers using water. For glycol chillers please contact the application engineering team.

Compliant with ASHRAE 90.1 - 2010,2013,2016,2019,2022.

Compliant with IECC - 2012,2015,2018.

Compliant with the requirements of the LEED Energy and Atmosphere Enhanced Refrigerant Management Credit (EAc4).

CRN included for the following provinces:Alberta, British Columbia, New Brunswick, Nova Scotia, Ontario, Quebec and Yukon

The product image shown is for illustrative purposes only and is not representative of selected options.

NOTE:

1. PLACEMENT ON A LEVEL SURFACE FREE OF OBSTRUCTIONS (INCLUDING SNOW, FOR WINTER OPERATION) OR AIR-CIRCULATION ENSURES RATE PERFORMANCE, RELIABLE OPERATION AND EASE OF MAINTENANCE. SITE RESTRICTIONS MAY COMPROMISED MINIMUM CLEARANCES INDICATED BELOW, RESULTING IN UNPREDICTABLE AIR FLOW PATTERNS AND POSSIBLE DIMINISHED PERFORMANCE. JOHNSON CONTROLS UNIT CONTROLS WILL OPTIMIZE OPERATION WITHOUT NUISANCE HIGH PRESSURE SAFETY CUTOUT. HOWEVER, THE SYSTEM DESIGNER MUST CONSIDER POTENTIAL PERFORMANCE DEGRADATION.

1.1. RECOMMENDED MINIMUM CLEARANCES:

- 1.1.1. SIDE TO WALL - 1828.8mm [72.00]
1.1.2. REAR TO WALL - 1828.8mm [72.00]
1.1.3. CONTROL PANEL TO WALL - 1219.2mm [48.00]
1.1.4.TOP - NO OBSTRUCTIONS ALLOWED.
1.1.5. DISTANCE BETWEEN ADJACENT UNITS - 3048mm [120.00]
1.1.6. NO MORE THAT ONE ADJACENT WALL MAY BE HIGHER THAN UNIT.

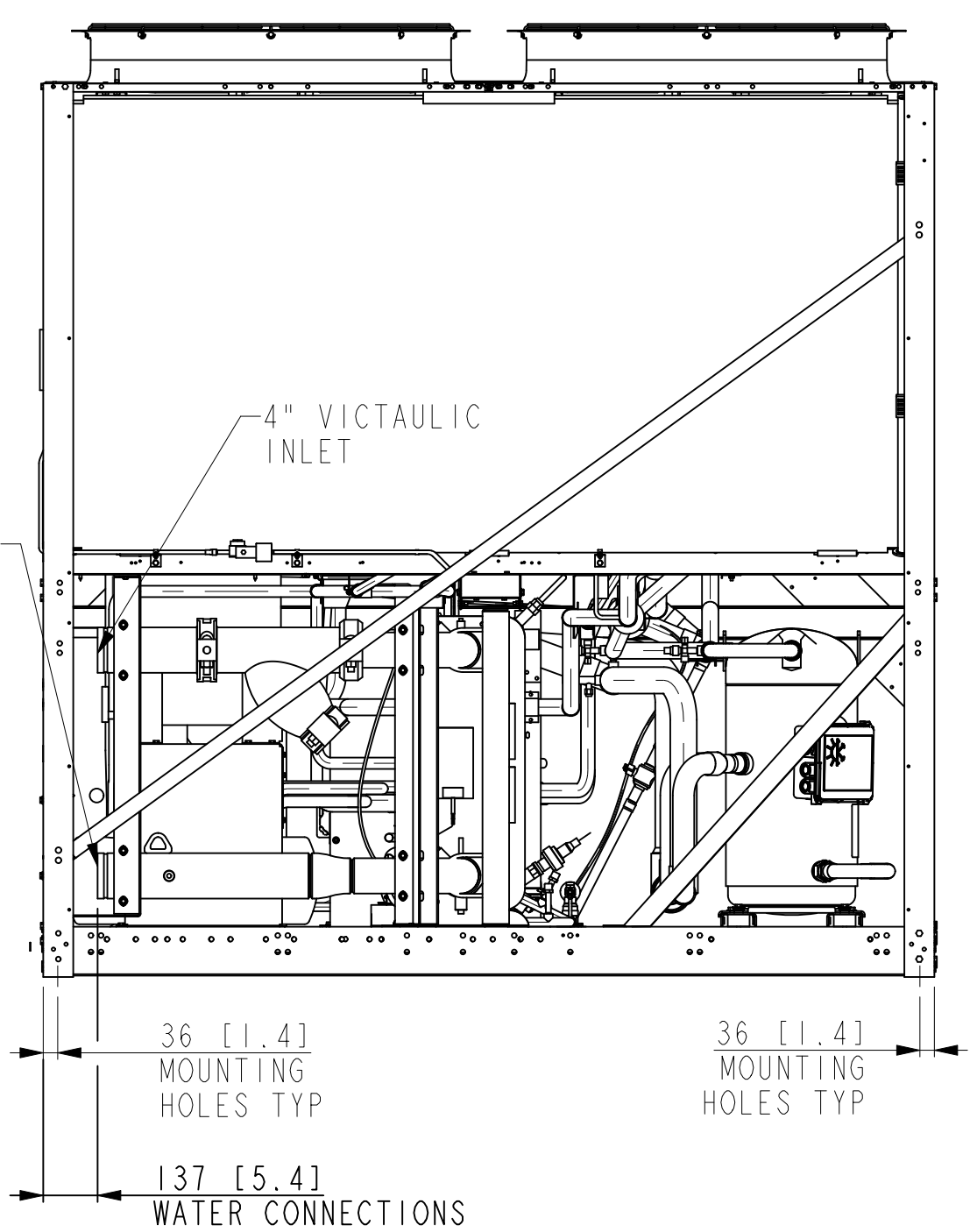
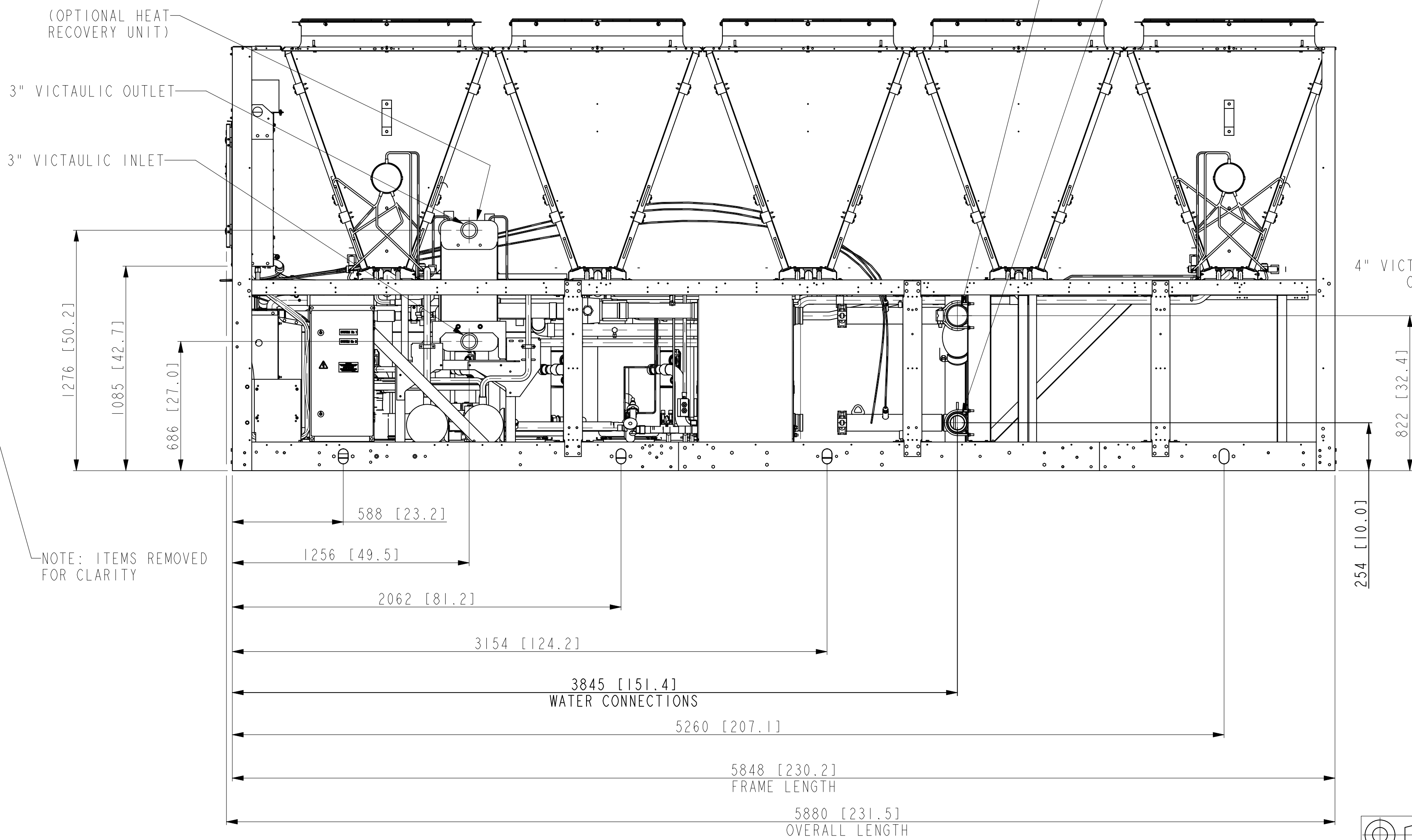
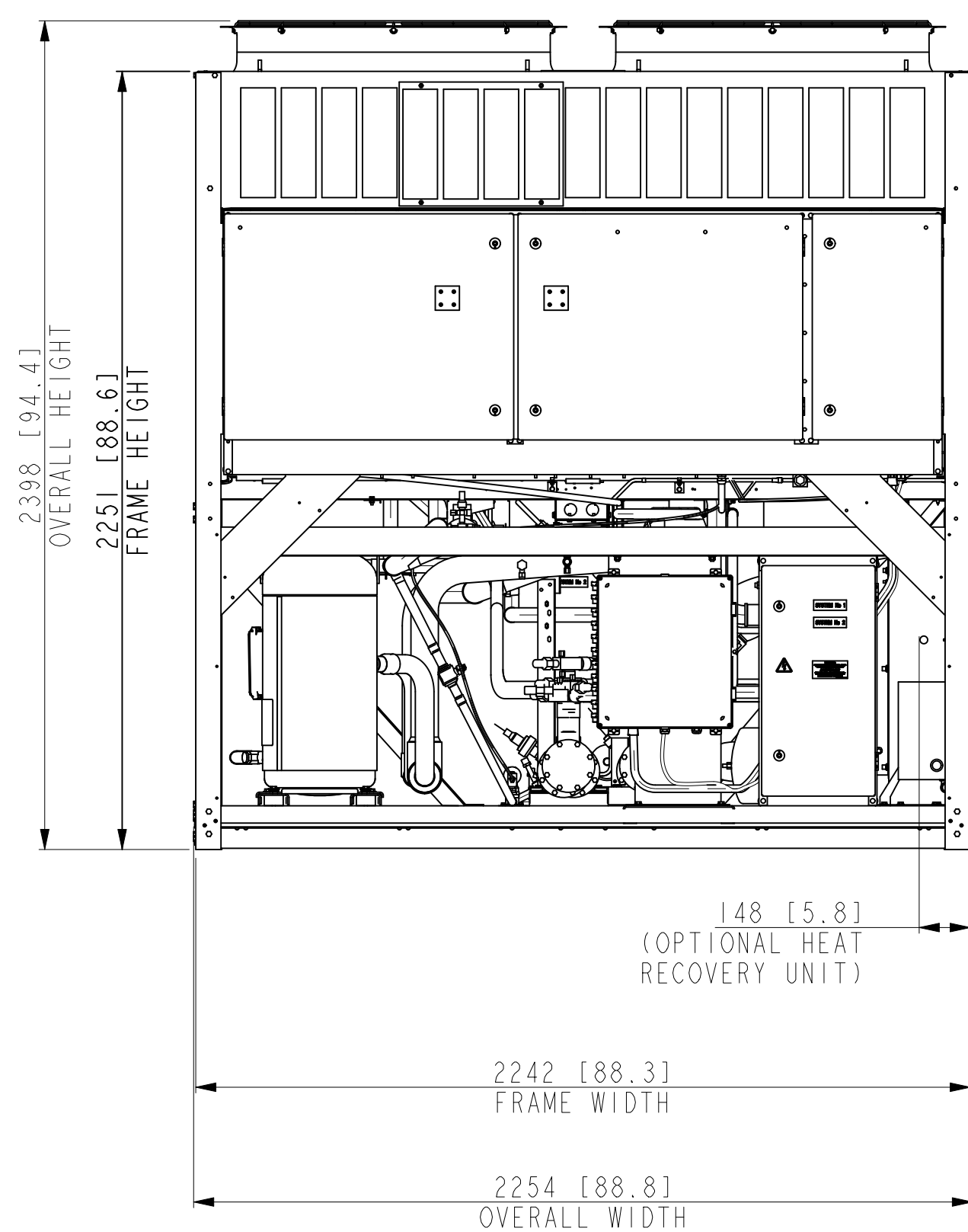
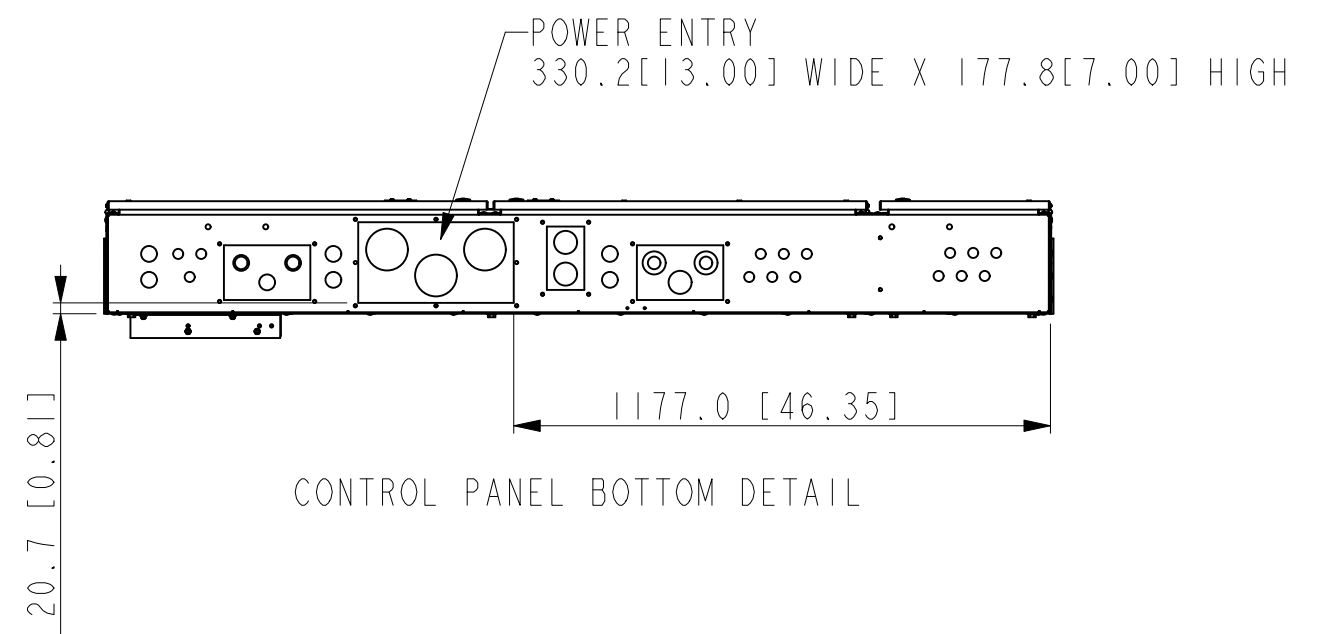
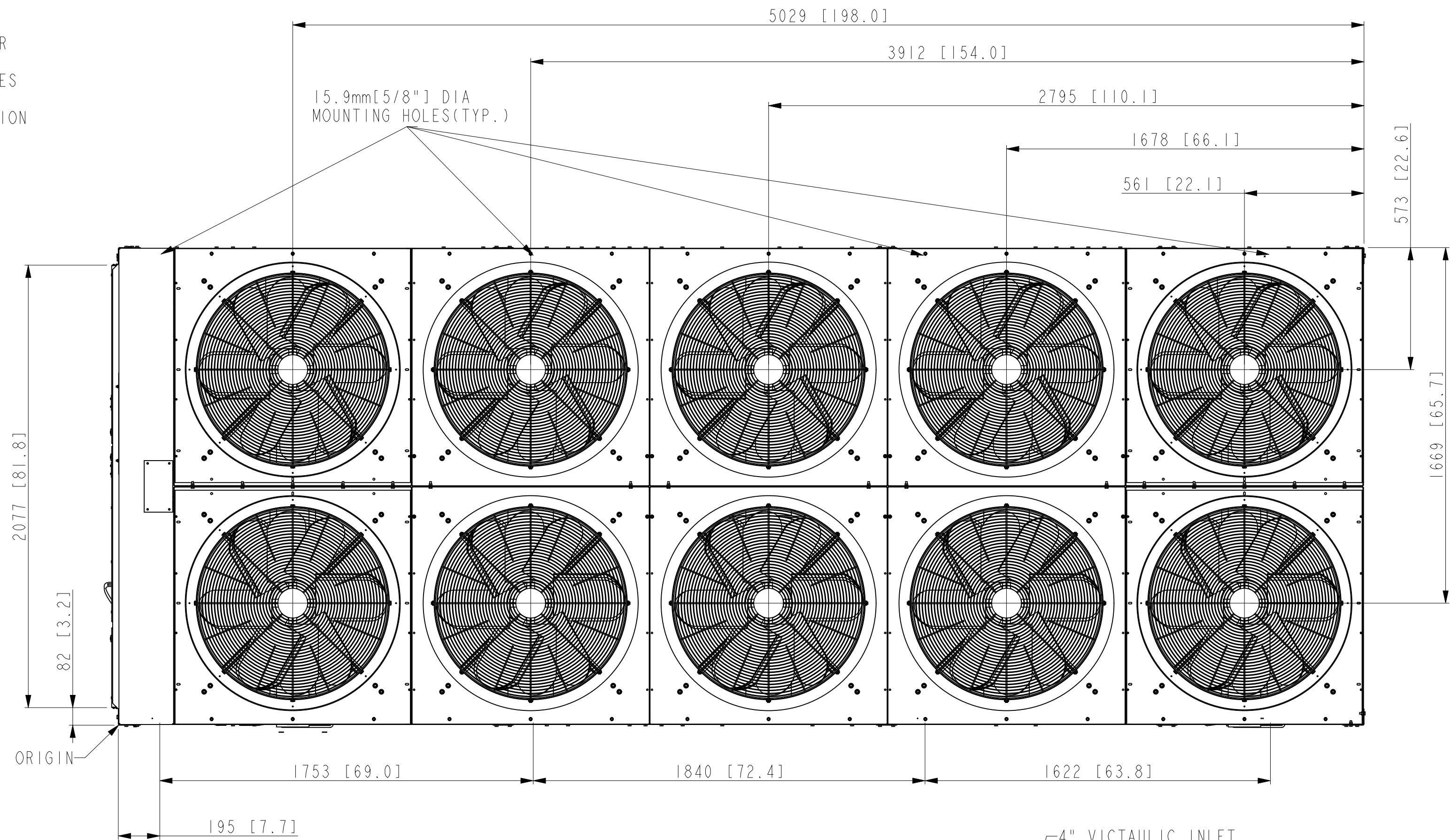
2. WEIGHT AND CENTRE OF GRAVITY- REF TO AVM REPORT.

3. INSTALLING CONTRACTOR MUST INCLUDE VENT AND DRAIN ACCOMMODATIONS IN CHILLED WATER PIPING NEAR EVAPORATOR.

4. NUMBER OF COMPRESSORS MAY VARY FROM DRAWING.

4.1. REFER TO YORKWORKS REPORTS.

5. FOR MONTERREY, MEXICO AND SAN ANTONIO, TEXAS BUILDS ONLY.



THIS DRAWING PERTAINS TO THE FOLLOWING MODELS:		
YLAA 0156 HE	YLAA 0170 SE	YLAA 0175 HE
YLAA 0156 HJ	YLAA 0170 SJ	YLAA 0175 HJ

REV.	DATE	EC. NO.	DR.	CHK.	ENG.
D	08-MAY-2023	ECN23-0279	RWA	DBN	AR
UPDATE TABLE TO INCLUDE YLAA 0156 HJ, 0170 SJ, AND 0175 HJ MODELS					

REV.	DATE	EC. NO.	DR.	CHK.	ENG.
D	08-MAY-2023	ECN23-0279	RWA	DBN	AR
UPDATE TABLE TO INCLUDE YLAA 0156 HJ, 0170 SJ, AND 0175 HJ MODELS					

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THIRD ANGLE

DO NOT SCALE

Johnson Controls

507 EAST MICHIGAN STREET, MILWAUKEE, WI, 53202-USA

YLAA 10-FAN 508 60HZ WITH HEAT RECOVERY 0156HE,0170SE,0175HE

MATERIAL N/A
ENG. STD. N/A
PART NO.
CUT SIZE N/A

DRAWN M. LUPTON 06-DEC-2013
MODELER M. LUPTON 06-DEC-2013
CHKD A. SATCH 06-DEC-2013
ENG

CAGE NUMBER 66935

DRAWING NUMBER 035-24059-012

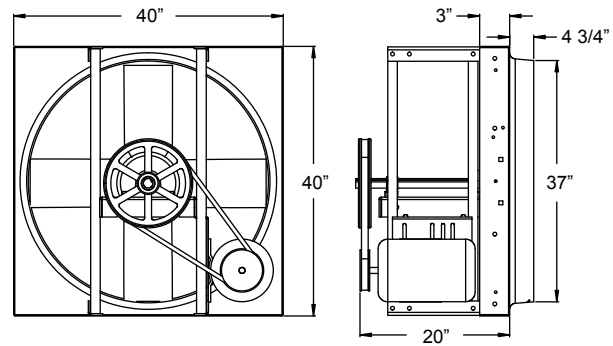
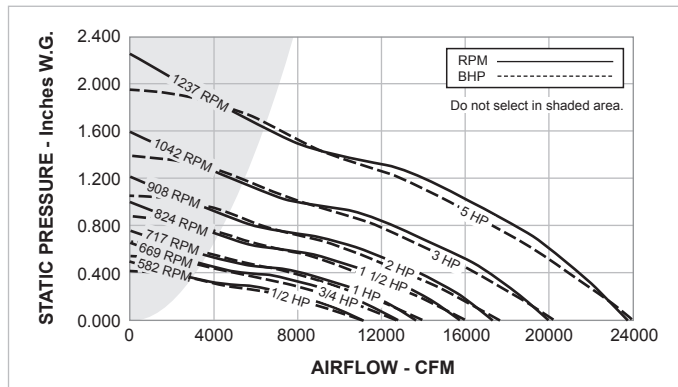
REVISION D
VERSION 2

SCALE: 0.060
MASS (kg): 0.000
ORIG. NO.:

SHEET 1 OF 1

Eng Chg

BCH36 | BELT DRIVE



Carbon Steel Panel = 16 Gage	Carbon Steel Mtr. Plate=10 Gage	Carbon Steel Tube = 16 Gage	Wall Opening = 40 3/4" SQ.	Est. Ship Weight = 195 lbs.
Wall Shutter ID = 40" SQ.	Max. Motor Frame Size = 184T	Peak BHP = (RPM/676) ³	Max. RPM = 1237 (5 HP)	

HP	RPM	Tip Speed FPM	0.000" SP		0.125" SP		0.250" SP		0.375" SP		0.500" SP		0.625" SP		0.750" SP		1.000" SP	
			Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1/2	370	3487	6.223	0.167	2136	0.180	-	-	-	-	-	-	-	-	-	-	-	-
	470	4430	7905	0.343	5215	0.348	1855	0.406	-	-	-	-	-	-	-	-	-	-
	582	5485	9788	0.651	7828	0.668	4684	0.653	2408	0.763	-	-	-	-	-	-	-	-
3/4	582	5485	14.6	0.651	17.4	0.668	16.6	0.653	14.6	0.763	-	-	-	-	-	-	-	-
	590	5561	9923	0.678	7998	0.695	4949	0.675	2576	0.785	-	-	-	-	-	-	-	-
	669	6305	11251	0.989	9641	1.012	7488	1.004	4416	1.032	2716	1.165	-	-	-	-	-	-
1	680	6409	11436	1.038	9857	1.063	7770	1.056	4708	1.072	2948	1.204	-	-	-	-	-	-
	717	6758	12059	1.217	10575	1.244	8692	1.245	5876	1.217	3754	1.345	-	-	-	-	-	-
	720	6786	12109	1.232	10633	1.259	8762	1.261	5976	1.230	3822	1.357	-	-	-	-	-	-
	740	6974	12445	1.338	11018	1.366	9223	1.370	6749	1.337	4272	1.441	2867	1.593	-	-	-	-
1 1/2	770	7257	12950	1.507	11590	1.537	9905	1.545	7772	1.516	5032	1.577	3499	2.029	-	-	-	-
	800	7540	13455	1.690	12158	1.722	10575	1.734	8667	1.711	5850	1.724	4160	2.164	2911	2.040	-	-
	824	7766	13858	1.847	12609	1.881	11090	1.894	9290	1.877	6656	1.853	4702	2.196	3425	2.164	-	-
	830	7823	13959	1.888	12721	1.922	11218	1.936	9444	1.920	6854	1.886	4836	2.196	3551	2.196	-	-
2	850	8011	14295	2.028	13095	2.063	11642	2.079	9954	2.068	7616	2.025	5333	2.305	3968	2.305	-	-
	880	8294	14800	2.250	13652	2.288	12271	2.306	10689	2.302	8697	2.259	6134	2.483	4640	2.483	-	-
	908	8558	15271	2.472	14170	2.511	12852	2.532	11335	2.531	9543	2.495	6999	2.659	5270	2.659	-	-
	920	8671	15473	2.571	14388	2.611	13099	2.634	11609	2.634	9901	2.600	7399	2.737	5539	2.737	-	-
	940	8859	15809	2.742	14747	2.784	13509	2.809	12062	2.811	10431	2.782	8105	2.876	6081	2.876	-	-
	970	9142	16314	3.013	15285	3.056	14102	3.084	12734	3.091	11202	3.069	9288	3.093	6878	3.093	-	-
	1000	9425	16818	3.302	15820	3.346	14685	3.375	13386	3.387	11960	3.375	10213	3.692	7845	3.692	-	-
3	1042	9821	17525	3.735	16567	3.781	15495	3.814	14278	3.830	12940	3.824	11429	4.038	9366	4.038	-	-
	1050	9896	17659	3.822	16708	3.868	15648	3.902	14447	3.918	13124	3.914	11637	4.107	9682	4.107	-	-
	1100	10367	18500	4.395	17593	4.443	16600	4.481	15491	4.503	14256	4.506	12917	4.566	11326	4.566	-	-
	1150	10838	19341	5.021	18473	5.072	17544	5.114	16519	5.143	15356	5.151	14122	5.093	12742	5.093	-	-
	1150	10838	51.5	5.021	51.5	5.072	58.0	5.114	56.4	5.143	55.2	5.151	54.1	5.139	54.4	5.093	52.6	5.074

Performance shown is for installation type A: free inlet, free outlet. Power rating (BHP) does not include transmission losses. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: Free inlet hemispherical sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

Table 5
Audible sound levels
(See [Clause 4.9.](#))

Transformer size, kV•A	Audible sound level, dBA
75	51
150 –300	55
500	56
750 –1000	58
1500	60
2000	61
2500	62
3000	63

GRILLE & DIFFUSER SCHEDULE						
DRAWING REFERENCE	MANUFACTURER	MODEL	SIZE	NECK SIZE	AIR RANGE [CFM]	REMARKS
D CFM	ROFLEX	DR	4"ø	4"ø	0-40	—
			5"ø	5"ø	41-125	—
SD CFM	NAILOR	RNS3	24"x24"	6"ø	0-175	—
				8"ø	176-275	—
SG CFM	NAILOR	61DH-O	6"x6"	—	0-100	—
			8"x6"	—	101-140	—
			12"x6"	—	141-200	—
			12"x8"	—	201-300	—
			16"x8"	—	301-400	—
			18"x10"	—	401-500	—
			20"x10"	—	501-600	—
			20"x12"	—	601-750	—
			20"x16"	—	751-1000	—
			20"x20"	—	1001-1300	—
SG-1 CFM	KREUGER	800 SERIES	12"x6"	—	0-300	C/W DAMPER.
SG-2 CFM	NAILOR	61DH-O	16"x10"	—	0-1000	—
EG CFM	NAILOR	61EC-O	6"x6"	—	0-100	—
			8"x8"	—	101-200	—
			12"x8"	—	201-300	—
			12"x12"	—	0-375	—
			16"x8"	—	301-370	—
			16"x10"	—	371-450	—
			16"x12"	—	451-620	—
			16"x16"	—	621-820	—
EG-1 CFM	NAILOR	61EC-O	20"x16"	—	820-1050	—
			26"x16"	—	1051-1300	—
RG-1 CFM	NAILOR	6145H	26"x18"	—	1301-1600	—
RG-2 CFM	—	—	—	—	0-1200	RETURN/ACCESS PANEL PROVIDED BY MANUFACTURER.
NOTES:						
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURERS.						
2. GRILLES AND DIFFUSERS TO BE ALL METAL CONSTRUCTION AND COME C/W WHITE ENAMEL FINISH. CONFIRM WITH ARCHITECT IF AN ALTERNATE COLOUR IS TO BE USED.						
3. ALL BRANCH DUCTWORK SERVING DIFFUSERS TO BE THE SAME SIZE AS DIFFUSER NECK UNLESS SPECIFIED OTHERWISE.						
4. ALL SIZES ARE NOMINAL. REVIEW MANUFACTURER'S LITERATURE FOR DIMENSIONAL DATA.						
5. THIS IS A STANDARD LEGEND, ALL SYMBOLS MAY NOT BE USED ON DRAWINGS.						

WALLBOX & LOUVER SCHEDULE					
DRAWING REFERENCE	MANUFACTURER	MODEL NO.	TYPE	SIZE [WxD]	REMARKS
WB-1	REVERSOMATIC	SWBL-8	EXHAUST	8"x8"	SINGLE WALL BOX.
WB-2	REVERSOMATIC	DWBL-8	EXHAUST	16"x8"	DOUBLE WALL BOX.
WB-3	REVERSOMATIC	TWBL-8	EXHAUST	24"x8"	TRIPLE WALL BOX.
WB-8	REVERSOMATIC	SWBL	INTAKE	8"x8"	SINGLE WALL BOX.
IL-1	VENTEX	2435	INTAKE	72"x76"	—
IL-2	VENTEX	2435	INTAKE	20"x20"	—
IL-3	VENTEX	2435	INTAKE	16"x24"	—
IL-4	VENTEX	2435	INTAKE	12"x16"	—
IL-5	VENTEX	2435	INTAKE	12"x36"	—
IL-6	VENTEX	2435	INTAKE	40"x20"	—
EL-1	VENTEX	2415	EXHAUST	20"x16"	—
EL-2	VENTEX	2415	EXHAUST	20"x28"	—
EL-3	VENTEX	2415	EXHAUST	12"x24"	—
EL-4	VENTEX	2415	EXHAUST	12"x16"	—
NOTES:					
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURERS.					
2. WALLBOXES AND LOUVERS ARE TO BE PAINTED TO MATCH THE ADJACENT WALL OR CLADDING. CONFIRM WITH ARCHITECT IF AN ALTERNATE COLOUR IS TO BE USED.					
3. ALL SIZES ARE NOMINAL. REVIEW MANUFACTURER'S LITERATURE FOR DIMENSIONAL DATA.					
4. THIS IS A STANDARD LEGEND, ALL SYMBOLS MAY NOT BE USED ON DRAWINGS.					

LINT TRAP SCHEDULE					
DRAWING REFERENCE	MANUFACTURER	MODEL	INLET (IN)	OUTLET (IN)	REMARKS
LT-1	REVERSOMATIC	LT200-45	4"	5"	—
NOTES:					
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURERS.					
2. LINT TRAPS MUST BE INSTALLED IN AN ACCESSIBLE LOCATION FOR PROPER CLEANING.					
3. LINT TRAPS TO BE RECESSED WHEREVER POSSIBLE.					

FAN COIL SCHEDULE																			
DRAWING REFERENCE	SERVICE	MANUFACTURER	MODEL	TYPE	STYLE	FAN		COOLING				HEATING			ELECTRICAL				REMARKS
						CFM	ESP [IN.H2O]	TOTAL CAPACITY [MBH]	SENSIBLE CAPACITY [MBH]	FLOW [GPM]	FLUID P.D. [FT.H2O]	TOTAL CAPACITY [MBH]	FLOW [GPM]	FLUID P.D. [FT.H2O]	ELECTRIC HEAT [KW]	V/P/H	MCA	MOCp	
FC-1	SUITES	ADP	B SERIES	2 PIPE	VERTICAL	400	0.3	14.6	10.8	3.0	3.0	17.7	3.0	1.3	2.5	208/1/60	13.7	20.0	—
FC-2	SUITES	ADP	B SERIES	2 PIPE	VERTICAL	600	0.3	18.0	14.2	3.0	3.0	21.8	3.0	2.8	2.5	208/1/60	13.7	20.0	—
FC-3	SUITES	ADP	B SERIES	2 PIPE	VERTICAL	800	0.3	22.9	18.3	4.0	5.5	29.7	4.0	4.8	2.5	208/1/60	13.7	20.0	—
FC-4	GYM	FIRST CO.	25/26UCXQB	2 PIPE/DX	VERTICAL	800	0.3	24.0	—	—	—	31.0	3.5	2.1	—	120/1/60	9.0	15.0	—
FC-5	PARTY ROOM	FIRST CO.	10CWX	2 PIPE	VERTICAL	1000	0.3	31.0	22.3	8.0	8.2	46.4	4.0	2.4	—	120/1/60	6.8	15.0	—
FC-6	LOBBY	FIRST CO.	6CWX	2 PIPE	VERTICAL	600	0.3	19.2	13.8	4.0	8.6	22.7	1.0	0.7	—	120/1/60	4.8	15.0	—
FC-7	AMENITY ROOM	FIRST CO.	4CWX	2 PIPE	VERTICAL	400	0.3	12.0	9.6	2.5	10.5	16.6	1.0	2.1	—	120/1/60	4.8	15.0	—
NOTES:																			
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURERS.																			
2. COOLING CAPACITY BASED ON 78°F DB/65°F WB EAT, 45°F EWT. HEATING CAPACITY BASED ON 70°F DB/51°F WB EAT, 140°F EWT.																			

FAN SCHEDULE														
DRAWING REFERENCE	SERVICE	MANUFACTURER	MODEL	TYPE	FLOW [CFM]	ESP [IN.H2O.]	DUCT SIZE	MOTOR			ACCESSORIES	LOCATION	MOUNTING	REMARKS
								HP	V/P/H	RPM				
EF-1	CEILING EXHAUST FAN	ORTECH	OD-1109	CEILING CABINET	95	0.20	5"ø	FHP	120/1/60	—	3,5	UNIT WASHROOMS	CEILING	CONTROLLED BY SWITCH UNLESS OTHERWISE NOTED.
EF-2	CEILING EXHAUST FAN	ORTECH	OD-110-18	CEILING CABINET	90	0.25	5"ø	FHP	120/1/60	—	3,5	SEE DRAWINGS	CEILING	CONTROLLED BY SWITCH UNLESS OTHERWISE NOTED.
EF-3	CEILING EXHAUST FAN	PENNBARRY	Z101S	CEILING CABINET	460	0.25	SEE DRAWINGS	0.25	120/1/60	1050	3,5	SEE DRAWINGS	CEILING	CONTROLLED BY SWITCH UNLESS OTHERWISE NOTED.
EF-4	GARBAGE ROOM	PENNBARRY	Z12S	CEILING CABINET	820	0.125	SEE DRAWINGS	0.5	120/1/60	1050	3,5,8	GARBAGE ROOM	CEILING	CONTROLLED BY WALL MOUNTED SPEED CONTROLLER PROVIDED WITH FAN AND WIRED BY ELECTRICAL. INTERLOCKED WITH INTAKE AND EXHAUST M.D.
EF-5	CHILLER ROOM GENERAL VENTILATION	PENNBARRY	Z5H	DIRECT DRIVE CEILING CABINET	130	0.125	SEE DRAWINGS	FHP	120/1/60	—	3,5	CHILLER ROOM	CEILING	CONTROLLED BY SWITCH.
EF-6	CHILLER ROOM RUPTURE VENTILATION	PENNBARRY	DX16R	DIRECT DRIVE ROOF EXHAUST	2000	0.125	SEE DRAWINGS	0.25	120/1/60	1550	3,4,5	CHILLER ROOM	ROOF CURB	CONTROLLED BY REFRIGERANT MONITORING SYSTEM.
EF-7	PARKING GARAGE	PENNBARRY	BHM48B	WALL MOUNTED	27850	0.125	—	3.0	575/3/60	394	5,7	PARKING GARAGE	SIDEWALL	CONTROLLED BY A CO MONITORING SYSTEM BY ELEC CONTRACTOR.
EF-8	MECHANICAL PENTHOUSE	PENNBARRY	ZBH-RA	CEILING CABINET	376	0.125	SEE DRAWINGS	FHP	120/1/60	1550	3,5	MECHANICAL PENTHOUSE	CEILING	CONTROLLED BY REVERSE ACTING THERMOSTAT SET TO 85°F. INTERLOCK WITH INTAKE M.D. INCLUDE OVERRIDE SWITCH (COORDINATE WITH ELECTRICAL)
SF-1	CACF ROOM	PENNBARRY	ZH3 TDA	DIRECT DRIVE CEILING CABINET IN-LINE	50	0.1	5"ø	FHP	120/1/60	1550	3,5	CACF ROOM	CEILING	CONTROLLED BY SWITCH.
SF-2	STAIRWELL PRESSURIZATION	PENNBARRY	SK100BC	BELT DRIVE CEILING	1000	0.5	SEE DRAWINGS	0.5	120/1/60	1981	1,5	SEE DRAWINGS	CEILING	CONTROLLED BY FIRE ALARM SYSTEM.
BF-1	DRYER BOOSTER FAN	REVERSOMATIC	TLD-200	INLINE	160	0.2	5"ø	FHP	120/1/60	—	5	UNIT LAUNDRY	CEILING	CONTROLLED BY AMP SWITCH PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
RH	RANGE HOOD	—	—	—	150	0.3	6"ø	FHP	120/1/60	—	3,5	UNIT KITCHENS	CEILING	FAN IS SUPPLIED BY OWNER, INSTALLED & DUCTED BY MECHANICAL CONTRACTOR.
ACCESSORIES; THE FOLLOWING ARE TO BE PROVIDED WITH THE FAN. PLEASE REVIEW SPECS FOR ALL ACCESSORIES.														
1. HANGING VIBRATION ISOLATORS				4. ROOF CURB BY FAN MANUFACTURER				7. WALL MOUNT SLEEVE, GRAVITY DAMPER, AND REAR GUARD						
2. BASE ISOLATOR KIT				5. DISCONNECT SWITCH				8 WALL MOUNTED SPEED CONTROLLER						
3. BACKDRAFT DAMPER				6. WEATHER HOOD				9. VFD AND CONTROLLER						
NOTES:														
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURES.														
2. ALL EXHAUST FANS SHOWN ON THE DRAWINGS ARE PROVIDED BY MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.														
3. ALL MOTORS REQUIRE THERMAL PROTECTION. IF MOTOR DOES NOT HAVE INTERNAL PROTECTION A STARTER COMPLETE WITH OVERLOADS MUST BE PROVIDED BY MECHANICAL CONTRACTOR.														
4. SOFT STARTERS ARE TO BE PROVIDED ON ALL MOTORS EQUAL TO OR LARGER THAN: 1HP-120V, 2HP-208V, 3HP-600V UNLESS OTHERWISE NOTED.														
5. ALL LOW VOLTAGE WIRING, COMPONENTS AND EQUIPMENT IS TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.														

ENERGY / HEAT RECOVERY VENTILATION UNIT SCHEDULE													
DRAWING REFERENCE	SERVICE	MANUFACTURER	MODEL	PRESSURE DROP [IN.H2O.]		SUPPLY AIR [CFM]		EXHAUST AIR [CFM]		SENSIBLE RECOVERY EFFICIENCY [65 CFM @ -25°C]	ELECTRICAL		CONTROL
				SUPPLY	EXHAUST	LOW	HIGH	LOW	HIGH		V/P/H	AMPS	
HRV-1	GYM	LIFEBREATH	350DCS	0.4	0.4	90	370	90	370	55%	120/1/60	6.3	FANS TO RUN CONTINUOUS AT LOW SPEED AND UPON ACTIVATION OF OCCUPANCY SENSOR (PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR), FANS TO RUN AT HIGH SPEED.
NOTES:													
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURES.													
2. CONTROL TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.													

BOILER SCHEDULE													
DRAWING REFERENCE	SERVICE	MANUFACTURER	MODEL	INPUT [MBH]	OUTPUT [MBH]	ELECTRICAL			CONNECTIONS [IN]				REMARKS
						V/P/H	MCA	MOCp	WATER	GAS	VENT	COMBUSTION	
B-1a,b,c	HEATING SYSTEM HOT WATER BOILER	LOCHINVAR	FTX850	850	825	120/1/60	12.0	15.0	2½	1	6	4	150°F MAX. LOOP TEMPERATURE.
B-2a,b	DOMESTIC HOT WATER BOILER	LOCHINVAR	AWH1000	1000	—	120/1/60	11.7	15.0	2½	1½	6	6	1187 GPH AT 100°F RISE.
NOTES:													
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURES.													

CHILLER SCHEDULE																										
DRAWING REFERENCE	MANUFACTURER	MODEL	CAPACITY [TONS]	FULL LOAD POWER [KW]	FULL LOAD [KW/TON]	IPLV LOAD [KW/TON]	SOUND PRESSURE [DBA]	EVAPORATOR					CONDENSER					ELECTRICAL			DIMENSIONS			REMARKS		
								FLUID TYPE	FLOW [GPM]	FLUID P.D. [FT.H2O]	EWI [°F]	LWT [°F]	FLUID FREEZING POINT [°F]	FLUID TYPE	FLOW [GPM]	FLUID P.D. [FT.H2O]	EWI [°F]	LWT [°F]	FLUID FREEZING POINT [°F]	V/P/H	MCA	MOP	LENGTH [IN]		WIDTH [IN]	HEIGHT [IN]
CH-1	CARRIER	30HXC206	216.5	142.0	0.6557	0.5376	84	WATER	433.0	11.0	57.0	45.0	32.0	WATER	616.0	22.7	85.0	95.0	32.0	575/3/60	210	250	149.0	36.0	71.0	—
NOTES:																										
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURES.																										

COOLING TOWER SCHEDULE																						
DRAWING REFERENCE	SERVICE	MANUFACTURER	MODEL	CAPACITY [TONS]	CAPACITY [MBH]	FAN			CONDENSING WATER					DIMENSIONS			REMARKS					
						FAN NUMBERS	HORSE POWER	AIR FLOW [CFM]	ELECTRICAL [V/P/H]	FLUID TYPE	FLOW [GPM]	INLET PRESSURE [PSI]	DROP [°F]	EWI [°F]	LWT [°F]	EAT WB [°F]		LENGTH [IN]	WIDTH [IN]	HEIGHT [IN]		
CT-1	CHILLER	EVAPCO	AT19-418	206.7	3100	1	10.0	37800	575/3/60	WATER	616.0	3.4		95.0	85.0	76.0	90.0	101.5	152.3	PROVIDE LADDER, VIBRATION ISOLATION RAILS, CONTROL/STARTER PANEL, EI. HEATERS (-20F/-29C AMBIENT) (1) Ⓢ 8KW, FAN MOTOR VFD.		
NOTES:																						
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURES.																						

RADIATION SCHEDULE								
DRAWING REFERENCE	MANUFACTURER	MODEL	DIMENSIONS [LxWxD]	TOTAL CAPACITY [BTU/H]	BTUH/FT.	WATER FLOW [GPM]	ELECTRICAL	REMARKS
BB-1	ROSEMEX	RB-10	2'-0" LONG	1,000	500	1.0	–	SLOPE TOP WALL FIN RADIATION.
BB-2	ROSEMEX	RB-10	3'-0" LONG	1,500	500	1.0	–	SLOPE TOP WALL FIN RADIATION.
BB-3	ROSEMEX	RB-10	4'-0" LONG	2,000	500	1.0	–	SLOPE TOP WALL FIN RADIATION.
BB-4	ROSEMEX	RB-10	5'-0" LONG	2,500	500	1.0	–	SLOPE TOP WALL FIN RADIATION.
BB-5	ROSEMEX	RB-10	6'-0" LONG	3,000	500	1.0	–	SLOPE TOP WALL FIN RADIATION.
BB-6	ROSEMEX	RB-10	7'-0" LONG	3,500	500	1.0	–	SLOPE TOP WALL FIN RADIATION.
BB-7	ROSEMEX	RB-10	8'-0" LONG	4,000	500	1.0	–	SLOPE TOP WALL FIN RADIATION.
BB-8	ROSEMEX	RVCES	9'-0" LONG	5,400	600	1.0	–	FLOOR MOUNT FLAT TOP PEDESTAL.
FF-1	TRANE	FF-020	34"x27"x10.5"	15,000	–	1.5	FHP, 120/1/60	VERTICAL WALL HUNG CABINET HEATER. UNIT MOUNTED FAN MODE SWITCH & SETPOINT DIAL.
FF-2	TRANE	FF-020	36"x30"x10.5"	15,000	–	1.5	FHP, 120/1/60	HORIZONTAL CEILING MOUNTED CABINET HEATER. FAN MODE SWITCH & WALL MOUNTED SETPOINT DIAL.
UH-1	TRANE	S-108	–	44,800	–	7.9	FHP, 120/1/60	PROVIDE WITH LINE VOLTAGE THERMOSTAT W/ LOCKING COVER.
UH-2	TRANE	S-48	–	19,900	–	3.5	FHP, 120/1/60	PROVIDE WITH LINE VOLTAGE THERMOSTAT W/ LOCKING COVER.
UH-3	TRANE	S-24	–	10,000	–	2	FHP,12/1/60	PROVIDE WITH LINE VOLTAGE THERMOSTAT W/ LOCKING COVER.
NOTES:								
1. REVIEW RELEVANT SPECIFICATIONS FOR SUPPLEMENTARY EQUIPMENT INFORMATION, PERTINENT ACCESSORIES AND ACCEPTABLE MANUFACTURERS.								
2. SELECTION BASED ON 65°F E.A.T., 140°F E.W.T.								
3. WHERE FLOOR PLANS CALL FOR MORE THAN 1 SECTION OF ELEMENT, PROVIDE CONTINUOUS ENCLOSURE OVER ENTIRE LENGTH AND PROVIDE ONLY ONE CONTROL VALVE PER ENCLOSURE.								
4. CABINET HEATERS ARE TO BE RECESSED OR SEMI-RECESSED WHERE POSSIBLE.								
5. THIS IS A STANDARD SCHEDULE. ALL UNITS MAY NOT NECESSARILY BE USED ON DRAWINGS.								

GENERAL NOTES

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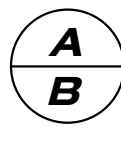
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CONTRACTOR IS FULLY RESPONSIBLE FOR MATTERS AFFECTING CONSTRUCTION.

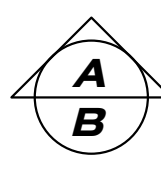
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DETAIL SYMBOL



A – DETAIL NUMBER
B – LOCATION/DETAIL SHEET

ELEVATION SYMBOL



A – ELEVATION NUMBER
B – LOCATION/DETAIL SHEET

NO.	DATE	ISSUED / REVISIONS
01	JAN 16/20	ISSUED FOR COORDINATION
02	MAR 27/20	ISSUED FOR OWNER REVIEW
03	APR 16/20	ISSUED FOR PERMIT
04	JULY 02/20	REISSUED FOR PERMIT
05	JUN 23/21	ISSUED FOR TENDER
06	DEC 22/21	ISSUED FOR CONSTRUCTION

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Tel: (519) 471-6667 Fax: (519) 471-0034

Email: sbm@sbmltd.ca



PROJECT

LANDMARK TOWER
70 DEAN AVENUE,
BARRIE, ONTARIO

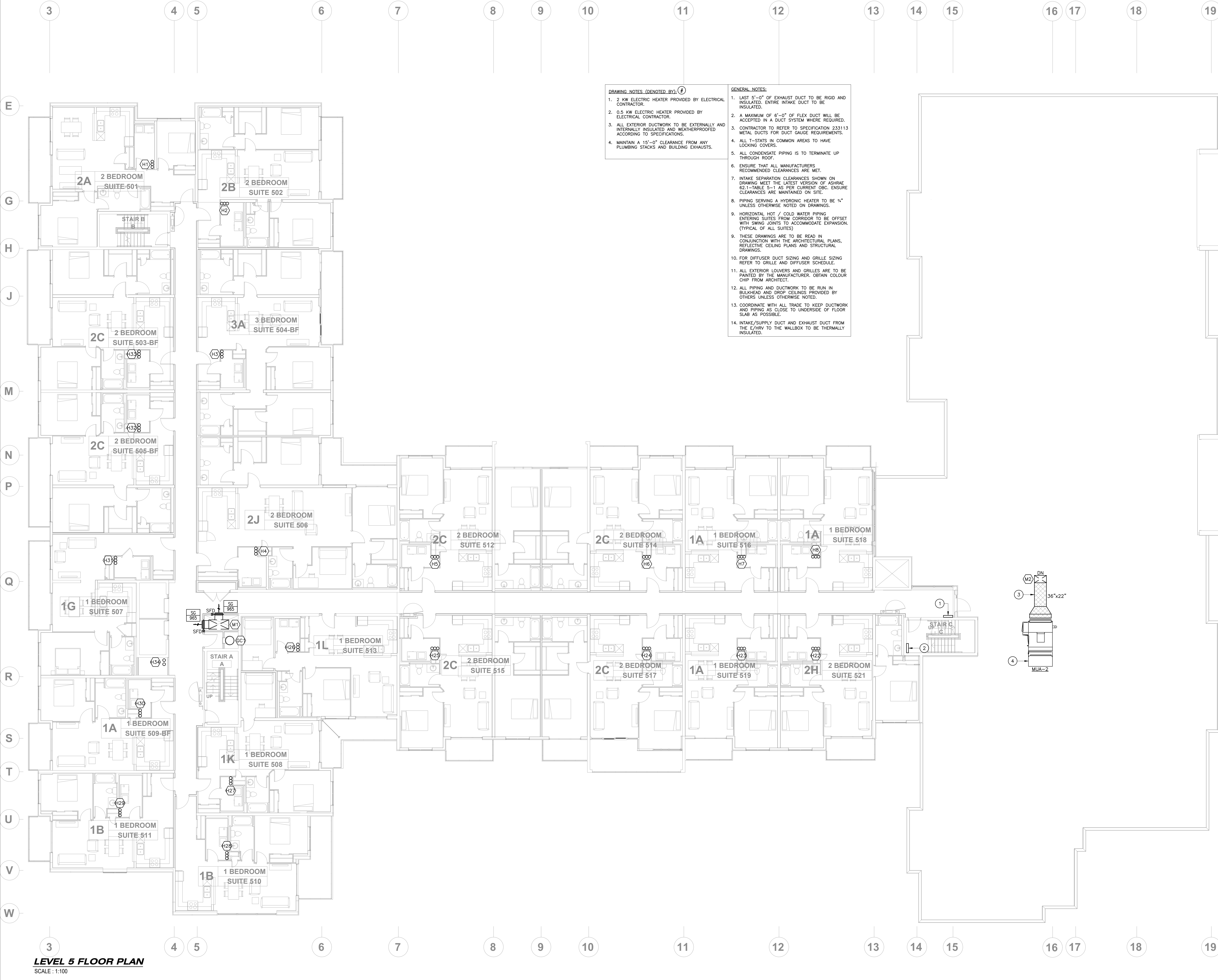
CLIENT

LANDMARK TOWER

DRAWING TITLE

SCHEDULES
-MECHANICAL

PROJ. NO.	SBM-18-1442	DRAWING NO.	
SCALE	N.T.S	M0.3	
DATE	DEC 2019		
DRAWN	JM		
DESIGNED	JM		
CHECKED	KCM	REVISION NO.	06



LEVEL 5 FLOOR PLAN
SCALE : 1:100

DRAWING NOTES (DENOTED BY: #)

- 2 KW ELECTRIC HEATER PROVIDED BY ELECTRICAL CONTRACTOR.
- 0.5 KW ELECTRIC HEATER PROVIDED BY ELECTRICAL CONTRACTOR.
- ALL EXTERIOR DUCTWORK TO BE EXTERNALLY AND INTERNALLY INSULATED AND WEATHERPROOFED ACCORDING TO SPECIFICATIONS.
- MAINTAIN A 15'-0" CLEARANCE FROM ANY PLUMBING STACKS AND BUILDING EXHAUSTS.

GENERAL NOTES:

- LAST 5'-0" OF EXHAUST DUCT TO BE RIGID AND INSULATED. ENTIRE INTAKE DUCT TO BE INSULATED.
- A MAXIMUM OF 6'-0" OF FLEX DUCT WILL BE ACCEPTED IN A DUCT SYSTEM WHERE REQUIRED.
- CONTRACTOR TO REFER TO SPECIFICATION 233113 METAL DUCTS FOR DUCT GAUGE REQUIREMENTS.
- ALL T-STATS IN COMMON AREAS TO HAVE LOCKING COVERS.
- ALL CONDENSATE PIPING IS TO TERMINATE UP THROUGH ROOF.
- ENSURE THAT ALL MANUFACTURERS' RECOMMENDED CLEARANCES ARE MET.
- INTAKE SEPARATION CLEARANCES SHOWN ON DRAWING MEET THE LATEST VERSION OF ASHRAE 62.1-TABLE 5-1 AS PER CURRENT OBC. ENSURE CLEARANCES ARE MAINTAINED ON SITE.
- PIPING SERVING A HYDRONIC HEATER TO BE 1/2" UNLESS OTHERWISE NOTED ON DRAWINGS.
- HORIZONTAL HOT / COLD WATER PIPING ENTERING SUITES FROM CORRIDOR TO BE OFFSET WITH SWING JOINTS TO ACCOMMODATE EXPANSION (TYPICAL OF ALL SUITES).
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL PLANS, REFLECTIVE CEILING PLANS AND STRUCTURAL DRAWINGS.
- FOR DIFFUSER DUCT SIZING AND GRILLE SIZING REFER TO GRILLE AND DIFFUSER SCHEDULE.
- ALL EXTERIOR LOUVERS AND GRILLES ARE TO BE PAINTED BY THE MANUFACTURER. OBTAIN COLOUR CHIP FROM ARCHITECT.
- ALL PIPING AND DUCTWORK TO BE RUN IN BULKHEAD AND DROP CEILINGS PROVIDED BY OTHERS UNLESS OTHERWISE NOTED.
- COORDINATE WITH ALL TRADE TO KEEP DUCTWORK AND PIPING AS CLOSE TO UNDERSIDE OF FLOOR SLAB AS POSSIBLE.
- INTAKE/SUPPLY DUCT AND EXHAUST DUCT FROM THE E/HRY TO THE WALLBOX TO BE THERMALLY INSULATED.

GENERAL NOTES

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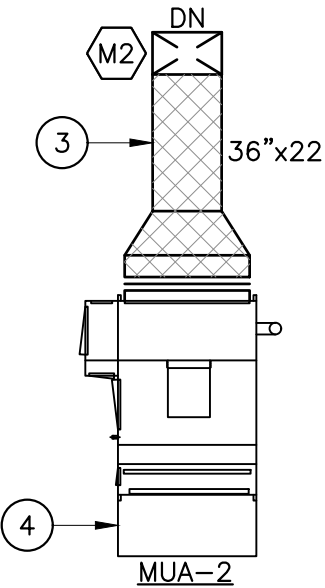
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06	JUN 23/21	ISSUED FOR TENDER	
07	SEPT 10/21	RE-ISSUED FOR ALT SOLUTION	
08	SEPT 21/21	ISSUED FOR CCN-M01	
09	DEC 22/21	ISSUED FOR CONSTRUCTION	

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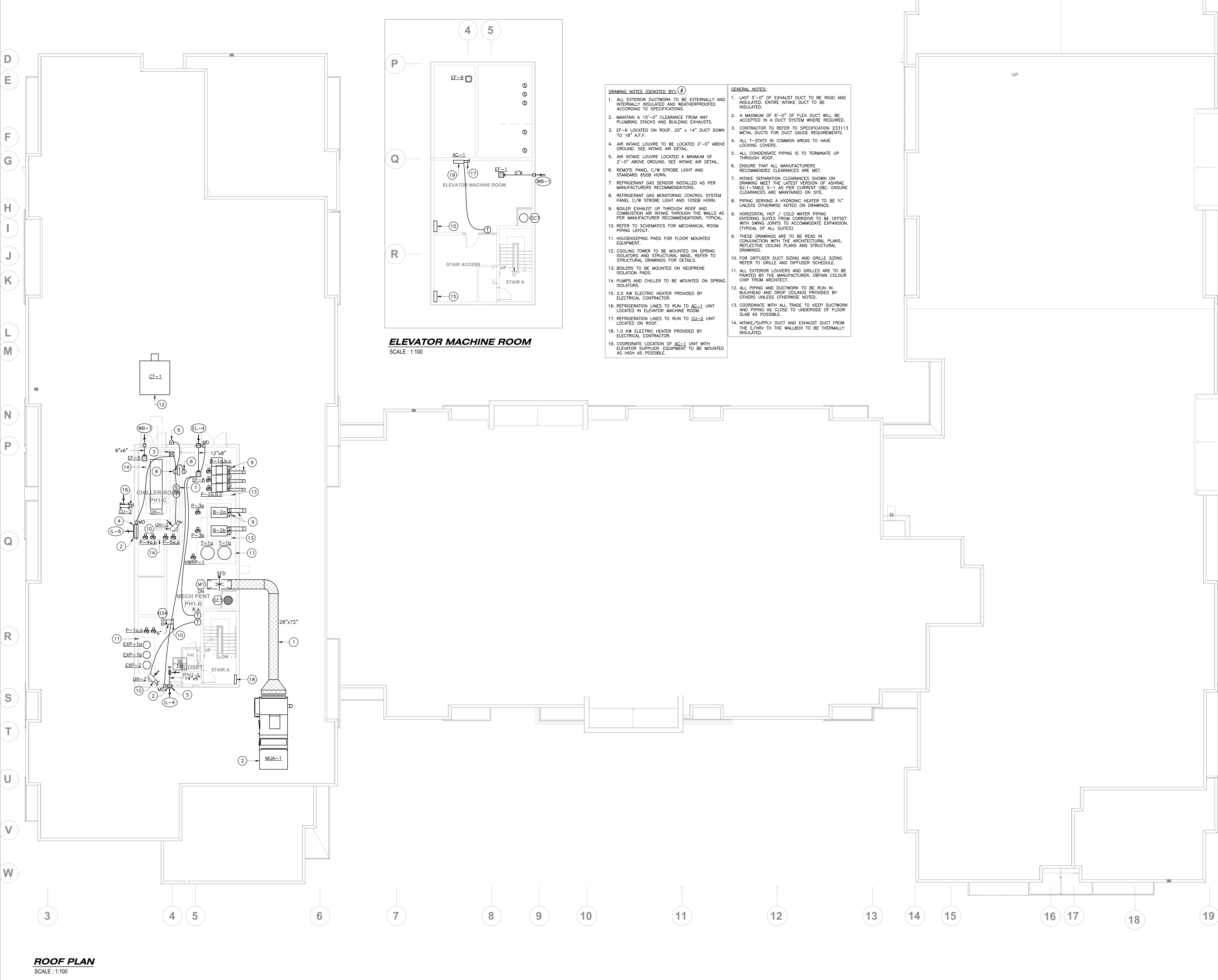
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1599 Adelaide St. N, Unit 301, London, Ontario, N5X 4E8

Tel: (519) 471-6667 Fax: (519) 471-0034

Email: sbm@sbmltd.ca

PROJECT		LANDMARK TOWER 70 DEAN AVENUE, BARRIE, ONTARIO	
CLIENT		LANDMARK TOWER	
DRAWING TITLE		LEVEL 5 FLOOR PLAN -HVAC	
PROJ. NO.	SBM-18-1442	DRAWING NO.	
SCALE	1:100	M6.5	
DATE	DEC 2019		
DRAWN	JM		
DESIGNED	JM		
CHECKED	KCM	REVISION NO.	09



ROOF PLAN
SCALE : 1:100

ELEVATOR MACHINE ROOM
SCALE : 1:100

DRAWING NOTES (DENOTED BY):

1. ALL EXTERIOR DUCTWORK TO BE EXTERNALLY AND INTERNALLY INSULATED AND WEATHERPROOFED ACCORDING TO SPECIFICATIONS.
2. MAINTAIN A 15'-0" CLEARANCE FROM ANY PLUMBING STACKS AND BUILDING EXHAUSTS.
3. EF-6 LOCATED ON ROOF. 20" x 14" DUCT DOWN TO 18" A.F.F.
4. AIR INTAKE LOUVRE TO BE LOCATED 2'-0" ABOVE GROUND. SEE INTAKE AIR DETAIL.
5. AIR INTAKE LOUVRE LOCATED A MINIMUM OF 2'-0" ABOVE GROUND. SEE INTAKE AIR DETAIL.
6. REMOTE PANEL C/W STROBE LIGHT AND STANDARD 65DB HORN.
7. REFRIGERANT GAS SENSOR INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
8. REFRIGERANT GAS MONITORING CONTROL SYSTEM PANEL C/W STROBE LIGHT AND 105DB HORN.
9. BOILER EXHAUST UP THROUGH ROOF AND COMBUSTION AIR INTAKE THROUGH THE WALLS AS PER MANUFACTURER RECOMMENDATIONS. TYPICAL.
10. REFER TO SCHEMATICS FOR MECHANICAL ROOM PIPING LAYOUT.
11. HOUSEKEEPING PADS FOR FLOOR MOUNTED EQUIPMENT.
12. COOLING TOWER TO BE MOUNTED ON SPRING ISOLATORS AND STRUCTURAL BASE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
13. BOILERS TO BE MOUNTED ON NEOPRENE ISOLATION PADS.
14. PUMPS AND CHILLER TO BE MOUNTED ON SPRING ISOLATORS.
15. 2.0 KW ELECTRIC HEATER PROVIDED BY ELECTRICAL CONTRACTOR.
16. REFRIGERATION LINES TO RUN TO AC-1 UNIT LOCATED IN ELEVATOR MACHINE ROOM.
17. REFRIGERATION LINES TO RUN TO QU-2 UNIT LOCATED ON ROOF.
18. 1.0 KW ELECTRIC HEATER PROVIDED BY ELECTRICAL CONTRACTOR.
19. COORDINATE LOCATION OF AC-1 UNIT WITH ELEVATOR SUPPLIER. EQUIPMENT TO BE MOUNTED AS HIGH AS POSSIBLE.

GENERAL NOTES:

1. LAST 5'-0" OF EXHAUST DUCT TO BE RIGID AND INSULATED. ENTIRE INTAKE DUCT TO BE INSULATED.
2. A MAXIMUM OF 6'-0" OF FLEX DUCT WILL BE ACCEPTED IN A DUCT SYSTEM WHERE REQUIRED.
3. CONTRACTOR TO REFER TO SPECIFICATION 233113 METAL DUCTS FOR DUCT GAUGE REQUIREMENTS.
4. ALL T-STATS IN COMMON AREAS TO HAVE LOCKING COVERS.
5. ALL CONDENSATE PIPING IS TO TERMINATE UP THROUGH ROOF.
6. ENSURE THAT ALL MANUFACTURERS RECOMMENDED CLEARANCES ARE MET.
7. INTAKE SEPARATION CLEARANCES SHOWN ON DRAWING MEET THE LATEST VERSION OF ASHRAE 62.1-TABLE 5-1 AS PER CURRENT OBC. ENSURE CLEARANCES ARE MAINTAINED ON SITE.
8. PIPING SERVING A HYDRONIC HEATER TO BE 1/2" UNLESS OTHERWISE NOTED ON DRAWINGS.
9. HORIZONTAL HOT / COLD WATER PIPING ENTERING SUITES FROM CORRIDOR TO BE OFFSET WITH SWING JOINTS TO ACCOMMODATE EXPANSION. (TYPICAL OF ALL SUITES)
9. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL PLANS, REFLECTIVE CEILING PLANS AND STRUCTURAL DRAWINGS.
10. FOR DIFFUSER DUCT SIZING AND GRILLE SIZING REFER TO GRILLE AND DIFFUSER SCHEDULE.
11. ALL EXTERIOR LOUVERS AND GRILLES ARE TO BE PAINTED BY THE MANUFACTURER. OBTAIN COLOUR CHIP FROM ARCHITECT.
12. ALL PIPING AND DUCTWORK TO BE RUN IN BULKHEAD AND DROP CEILINGS PROVIDED BY OTHERS UNLESS OTHERWISE NOTED.
13. COORDINATE WITH ALL TRADE TO KEEP DUCTWORK AND PIPING AS CLOSE TO UNDERSIDE OF FLOOR SLAB AS POSSIBLE.
14. INTAKE/SUPPLY DUCT AND EXHAUST DUCT FROM THE E/HVYR TO THE WALLBOX TO BE THERMALLY INSULATED.

GENERAL NOTES

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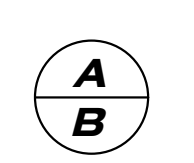
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CONTRACTOR IS FULLY RESPONSIBLE FOR MATTERS AFFECTING CONSTRUCTION.

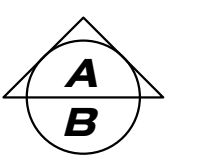
ANY MATERIAL ALTERATIONS CARRIED OUT DURING CONSTRUCTION BY THE CONTRACTOR OR ASSOCIATED SUB-CONTRACTOR SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO INSTALLATION. FAILURE TO DO SO RESULTS IN FULL CONTRACTOR RESPONSIBILITY FOR SYSTEMS EFFECTED.

DETAIL SYMBOL



A - DETAIL NUMBER
B - LOCATION/DETAIL SHEET

ELEVATION SYMBOL

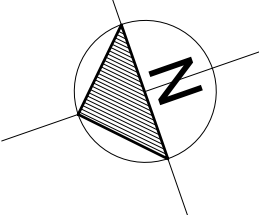


A - ELEVATION NUMBER
B - LOCATION/DETAIL SHEET

NO.	DATE	ISSUED / REVISIONS
01	JAN 16/20	ISSUED FOR COORDINATION
02	MAR 13/20	ISSUED FOR COORDINATION
03	MAR 27/20	ISSUED FOR OWNER REVIEW
04	APR 16/20	ISSUED FOR PERMIT
05	JULY 02/20	REISSUED FOR PERMIT
06	JUN 23/21	ISSUED FOR TENDER
07	SEPT 10/21	RE-ISSUED FOR ALT SOLUTION
08	SEPT 21/21	ISSUED FOR CCN-M01
09	DEC 22/21	ISSUED FOR CONSTRUCTION

70 Dean

sbm **STRIK BALDINELLI MONIZ**
PLANNING • CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL
1599 Adelaide St. N, Unit 301, London, Ontario, N5X 4E8
Tel: (519) 471-6667 Fax: (519) 471-0034
Email: sbm@sbmlltd.ca



PROJECT

**LANDMARK TOWER
70 DEAN AVENUE,
BARRIE, ONTARIO**

CLIENT

LANDMARK TOWER

DRAWING TITLE

**ROOF PLAN
-HVAC**

PROJ. NO.	SBM-18-1442	DRAWING NO.	
SCALE	1:100		
DATE	DEC 2019		
DRAWN	JM		
DESIGNED	JM		
CHECKED	KCM	REVISION NO.	09



Baltimore Aircoil Company Cooling Tower Selection Report

Version: 8.11.7 NA
Product data correct as of: June 21, 2021

Project Name: 70 Landmark
Selection Name: CT-1
Project State/Province: Ontario
Project Country: Canada
Date: July 28, 2021

Model Information

Product Line: PT2
Model: PT2-0709A-3K1
Number of Units: 1
Fan Type: Standard Fan
Fan Motor: (1) 10.00 = 10.00 HP/Unit
Total Standard Fan Power: Full Speed, 10.00 BHP/Unit

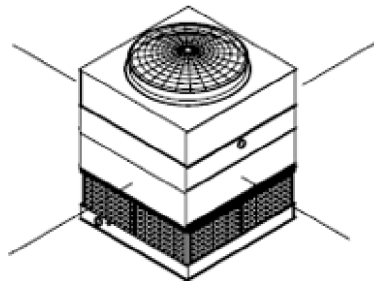
Intake Option: None
Internal Option: None
Discharge Option: None

Octave band and A-weighted sound pressure levels (Lp) are expressed in decibels (dB) reference 0.0002 microbar. Sound power levels (Lw) are expressed in decibels (dB) reference one picowatt. Octave band 1 has a center frequency of 63 Hertz.

Top Sound Pressure (dB)		
Octave Band	Distance	
	5 ft.	50 ft.
1	83	72
2	87	75
3	87	75
4	81	69
5	75	60
6	71	56
7	67	53
8	65	50
A-wgtd	83	70

Motor Side Sound Pressure (dB)		
Octave Band	Distance	
	5 ft.	50 ft.
1	81	74
2	83	75
3	83	72
4	75	64
5	70	59
6	68	53
7	68	52
8	67	51
A-wgtd	79	67

Air Inlet Sound Pressure (dB)		
Octave Band	Distance	
	5 ft.	50 ft.
1	81	75
2	84	73
3	82	72
4	76	65
5	70	59
6	67	54
7	67	52
8	67	51
A-wgtd	79	68



Air Inlet Sound Pressure (dB)		
Octave Band	Distance	
	5 ft.	50 ft.
1	81	75
2	84	73
3	82	72
4	76	65
5	70	59
6	67	54
7	67	52
8	67	51
A-wgtd	79	68

Side Opposite Motor Sound Pressure (dB)		
Octave Band	Distance	
	5 ft.	50 ft.
1	81	74
2	83	75
3	83	72
4	77	65
5	71	58
6	67	54
7	67	52
8	67	51
A-wgtd	79	68

Total Sound Power (dB)		
Octave Band	Center Frequency (Hertz)	Lw
1	63	105
2	125	107
3	250	107
4	500	101
5	1000	93
6	2000	88
7	4000	86
8	8000	83
A-wgtd		102

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Note: The use of frequency inverters (variable frequency drives) can increase sound levels.

Extra Notes: Sound data provided by CTI ATC-128 sound test code revision 2019

48TF, 50TFF Single-Packaged Rooftop Units - Physical Data

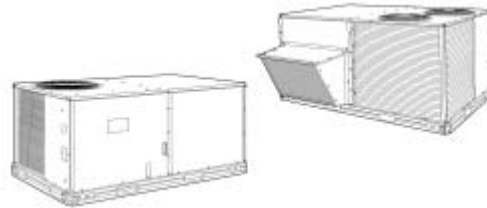


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48TF

Standard-Efficiency
Single-Packaged Rooftop Units
3 to 12½ Nominal Tons

48TF - Electric Cooling/Gas Heating
50TFF - Electric Cooling/Electric Heating



Dimensions

TONNAGE	DIMENSIONS (in.)		
	LENGTH	WIDTH	HEIGHT
3-6	73 11/16	45	33 5/16
7.5-8.5	87 3/8	57 3/4	41 5/16
10-12.5	87 3/8	57 3/4	49 5/16

Library and Plaza
(assumed)

Performance & Sizing Information

48TF GAS/ELECTRIC

UNIT 48TF	NOMINAL TONS	NET COOLING CAPACITY (Btuh)	TOTAL kW	SEER		EER	SOUND RATING (Bels)
				Belt Drive	Direct Drive		
004	3	35,000	4.0	10.0	9.7	8.7	8.1
005	4	47,000	5.3	10.0	9.7	8.8	8.1
006	5	57,000	6.7	10.0	9.7	8.5	8.1

UNIT 48TF	NOMINAL TONS	NET COOLING CAPACITY (Btuh)	TOTAL kW	EER	SOUND RATING (Bels)	IPLV
007	6	72,000	8.0	9.0	8.1	-
008	7 1/2	85,000	9.6	8.9	8.7	9.4
009	8 1/2	98,000	10.9	9.0	8.7	9.0
012	10	117,000	13.0	9.0	8.8	9.4
014	12 1/2	144,000	16.0	9.0	8.7	9.2

APPENDIX 'E'

SAMPLE STATIONARY **NOISE CALCULATIONS**

Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (mitigated) (Receptor R2)											
Day	Ref Sound	Ref	duty	cycle	No.	No.	dist	dist attn	shielding	screen	SPL
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn			
1	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
2	88	0.4	1.00	0.00	1	0.00	5000.0	-81.94			6
3	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
4	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
5	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
6	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
7	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
8	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
9	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
10	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
11	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
12	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
13	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
14	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
15	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
16	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
17	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
18	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
19	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
20	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
21	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	125.3	-49.92			31
26	81	0.4	1.00	0.00	1	0.00	125.4	-49.92			31
27	81	0.4	1.00	0.00	1	0.00	126.2	-49.98			31
28	81	0.4	1.00	0.00	1	0.00	127.1	-50.04			31
29	81	0.4	1.00	0.00	1	0.00	128.2	-50.12			31
30	81	0.4	1.00	0.00	1	0.00	130.0	-50.24			31
31	81	0.4	1.00	0.00	1	0.00	131.7	-50.35			31
32	81	0.4	1.00	0.00	1	0.00	133.7	-50.48			31
33	90	0.4	1.00	0.00	1	0.00	66.1	-44.36	-2.00		44
34	79	1.5	1.00	0.00	1	0.00	90.4	-35.60	-5.00		38
35	90	0.4	1.00	0.00	1	0.00	43.8	-40.79		-7.00	42
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
38	93	0.4	1.00	0.00	1	0.00	5000.0	-81.94			11
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated roof edge shielding

Total Sound Pressure Level (dBA) 47.52

Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
2	88	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	5
3	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
4	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
5	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
6	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
7	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
8	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
9	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
10	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
11	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
12	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
13	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
14	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
15	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
16	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
17	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
18	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
19	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
20	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
21	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	125.3	-49.92	0.00	0.00	30
26	81	0.4	0.75	-1.25	1	0.00	125.4	-49.92	0.00	0.00	30
27	81	0.4	0.75	-1.25	1	0.00	126.2	-49.98	0.00	0.00	30
28	81	0.4	0.75	-1.25	1	0.00	127.1	-50.04	0.00	0.00	30
29	81	0.4	0.75	-1.25	1	0.00	128.2	-50.12	0.00	0.00	30
30	81	0.4	0.75	-1.25	1	0.00	130.0	-50.24	0.00	0.00	30
31	81	0.4	0.75	-1.25	1	0.00	131.7	-50.35	0.00	0.00	29
32	81	0.4	0.75	-1.25	1	0.00	133.7	-50.48	0.00	0.00	29
33	90	0.4	0.75	-1.25	1	0.00	66.1	-44.36	-2.00	0.00	42
34	79	1.5	0.75	-1.25	1	0.00	90.4	-35.60	-5.00	0.00	37
35	90	0.4	0.75	-1.25	1	0.00	43.8	-40.79	0.00	-7.00	41
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
38	93	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	10
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	46.27
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
2	88	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	3
3	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
4	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
5	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
6	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
7	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
8	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
9	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
10	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
11	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
12	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
13	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
14	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
15	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
16	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
17	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
18	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
19	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
20	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
21	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	125.3	-49.92	0.00	0.00	28
26	81	0.4	0.50	-3.01	1	0.00	125.4	-49.92	0.00	0.00	28
27	81	0.4	0.50	-3.01	1	0.00	126.2	-49.98	0.00	0.00	28
28	81	0.4	0.50	-3.01	1	0.00	127.1	-50.04	0.00	0.00	28
29	81	0.4	0.50	-3.01	1	0.00	128.2	-50.12	0.00	0.00	28
30	81	0.4	0.50	-3.01	1	0.00	130.0	-50.24	0.00	0.00	28
31	81	0.4	0.50	-3.01	1	0.00	131.7	-50.35	0.00	0.00	28
32	81	0.4	0.50	-3.01	1	0.00	133.7	-50.48	0.00	0.00	28
33	90	0.4	0.50	-3.01	1	0.00	66.1	-44.36	-2.00	0.00	41
34	79	1.5	0.50	-3.01	1	0.00	90.4	-35.60	-5.00	0.00	35
35	90	0.4	0.50	-3.01	1	0.00	43.8	-40.79	0.00	-7.00	39
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
38	93	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	8
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	44.51
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (mitigated) (Receptor R3)

Day	Ref Sound	Ref	duty	cycle	No.	No.	dist	dist attn	shielding	screen	SPL
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn			
1	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
2	88	0.4	1.00	0.00	1	0.00	5000.0	-81.94			6
3	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
4	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
5	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
6	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
7	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
8	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
9	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
10	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
11	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
12	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
13	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
14	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
15	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
16	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
17	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
18	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
19	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
20	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
21	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	98.4	-47.82			33
26	81	0.4	1.00	0.00	1	0.00	98.6	-47.84			33
27	81	0.4	1.00	0.00	1	0.00	99.6	-47.92			33
28	81	0.4	1.00	0.00	1	0.00	100.7	-48.02			33
29	81	0.4	1.00	0.00	1	0.00	102.1	-48.14			33
30	81	0.4	1.00	0.00	1	0.00	104.3	-48.32			33
31	81	0.4	1.00	0.00	1	0.00	106.4	-48.50			33
32	81	0.4	1.00	0.00	1	0.00	108.9	-48.70			32
33	90	0.4	1.00	0.00	1	0.00	44.9	-41.00		-5.00	44
34	79	1.5	1.00	0.00	1	0.00	73.1	-33.76	-20.00		25
35	90	0.4	1.00	0.00	1	0.00	51.9	-42.26		-5.00	43
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
38	93	0.4	1.00	0.00	1	0.00	5000.0	-81.94			11
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated MPH shielding

Total Sound Pressure Level (dBA) 47.76

Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
2	88	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	5
3	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
4	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
5	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
6	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
7	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
8	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
9	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
10	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
11	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
12	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
13	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
14	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
15	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
16	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
17	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
18	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
19	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
20	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
21	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	98.4	-47.82	0.00	0.00	32
26	81	0.4	0.75	-1.25	1	0.00	98.6	-47.84	0.00	0.00	32
27	81	0.4	0.75	-1.25	1	0.00	99.6	-47.92	0.00	0.00	32
28	81	0.4	0.75	-1.25	1	0.00	100.7	-48.02	0.00	0.00	32
29	81	0.4	0.75	-1.25	1	0.00	102.1	-48.14	0.00	0.00	32
30	81	0.4	0.75	-1.25	1	0.00	104.3	-48.32	0.00	0.00	31
31	81	0.4	0.75	-1.25	1	0.00	106.4	-48.50	0.00	0.00	31
32	81	0.4	0.75	-1.25	1	0.00	108.9	-48.70	0.00	0.00	31
33	90	0.4	0.75	-1.25	1	0.00	44.9	-41.00	0.00	-5.00	43
34	79	1.5	0.75	-1.25	1	0.00	73.1	-33.76	-20.00	0.00	24
35	90	0.4	0.75	-1.25	1	0.00	51.9	-42.26	0.00	-5.00	41
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
38	93	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	10
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	46.51
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
2	88	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	3
3	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
4	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
5	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
6	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
7	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
8	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
9	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
10	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
11	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
12	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
13	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
14	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
15	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
16	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
17	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
18	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
19	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
20	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
21	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	98.4	-47.82	0.00	0.00	30
26	81	0.4	0.50	-3.01	1	0.00	98.6	-47.84	0.00	0.00	30
27	81	0.4	0.50	-3.01	1	0.00	99.6	-47.92	0.00	0.00	30
28	81	0.4	0.50	-3.01	1	0.00	100.7	-48.02	0.00	0.00	30
29	81	0.4	0.50	-3.01	1	0.00	102.1	-48.14	0.00	0.00	30
30	81	0.4	0.50	-3.01	1	0.00	104.3	-48.32	0.00	0.00	30
31	81	0.4	0.50	-3.01	1	0.00	106.4	-48.50	0.00	0.00	29
32	81	0.4	0.50	-3.01	1	0.00	108.9	-48.70	0.00	0.00	29
33	90	0.4	0.50	-3.01	1	0.00	44.9	-41.00	0.00	-5.00	41
34	79	1.5	0.50	-3.01	1	0.00	73.1	-33.76	-20.00	0.00	22
35	90	0.4	0.50	-3.01	1	0.00	51.9	-42.26	0.00	-5.00	40
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
38	93	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	8
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	44.75
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (mitigated) (Receptor R4)											
Day	Ref Sound	Ref	duty	cycle	No.	No.	dist	dist attn	shielding	screen	SPL
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.					
1	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
2	88	0.4	1.00	0.00	1	0.00	5000.0	-81.94			6
3	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
4	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
5	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
6	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
7	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
8	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
9	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
10	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
11	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
12	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
13	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
14	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
15	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
16	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
17	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
18	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
19	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
20	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
21	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	65.2	-44.24			37
26	81	0.4	1.00	0.00	1	0.00	65.6	-44.30			37
27	81	0.4	1.00	0.00	1	0.00	67.0	-44.48			37
28	81	0.4	1.00	0.00	1	0.00	68.7	-44.70			36
29	81	0.4	1.00	0.00	1	0.00	70.8	-44.96			36
30	81	0.4	1.00	0.00	1	0.00	73.8	-45.32			36
31	81	0.4	1.00	0.00	1	0.00	76.8	-45.67			35
32	81	0.4	1.00	0.00	1	0.00	80.2	-46.04			35
33	90	0.4	1.00	0.00	1	0.00	33.5	-38.46		-10.00	42
34	79	1.5	1.00	0.00	1	0.00	62.2	-32.35	-20.00		27
35	90	0.4	1.00	0.00	1	0.00	75.3	-45.49		-5.00	40
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
38	93	0.4	1.00	0.00	1	0.00	5000.0	-81.94			11
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated roof edge shielding

Total Sound Pressure Level (dBA) 47.49

Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
2	88	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	5
3	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
4	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
5	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
6	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
7	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
8	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
9	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
10	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
11	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
12	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
13	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
14	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
15	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
16	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
17	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
18	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
19	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
20	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
21	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	65.2	-44.24	0.00	0.00	36
26	81	0.4	0.75	-1.25	1	0.00	65.6	-44.30	0.00	0.00	35
27	81	0.4	0.75	-1.25	1	0.00	67.0	-44.48	0.00	0.00	35
28	81	0.4	0.75	-1.25	1	0.00	68.7	-44.70	0.00	0.00	35
29	81	0.4	0.75	-1.25	1	0.00	70.8	-44.96	0.00	0.00	35
30	81	0.4	0.75	-1.25	1	0.00	73.8	-45.32	0.00	0.00	34
31	81	0.4	0.75	-1.25	1	0.00	76.8	-45.67	0.00	0.00	34
32	81	0.4	0.75	-1.25	1	0.00	80.2	-46.04	0.00	0.00	34
33	90	0.4	0.75	-1.25	1	0.00	33.5	-38.46	0.00	-10.00	40
34	79	1.5	0.75	-1.25	1	0.00	62.2	-32.35	-20.00	0.00	25
35	90	0.4	0.75	-1.25	1	0.00	75.3	-45.49	0.00	-5.00	38
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
38	93	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	10
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	46.24
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
2	88	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	3
3	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
4	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
5	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
6	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
7	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
8	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
9	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
10	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
11	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
12	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
13	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
14	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
15	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
16	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
17	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
18	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
19	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
20	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
21	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	65.2	-44.24	0.00	0.00	34
26	81	0.4	0.50	-3.01	1	0.00	65.6	-44.30	0.00	0.00	34
27	81	0.4	0.50	-3.01	1	0.00	67.0	-44.48	0.00	0.00	34
28	81	0.4	0.50	-3.01	1	0.00	68.7	-44.70	0.00	0.00	33
29	81	0.4	0.50	-3.01	1	0.00	70.8	-44.96	0.00	0.00	33
30	81	0.4	0.50	-3.01	1	0.00	73.8	-45.32	0.00	0.00	33
31	81	0.4	0.50	-3.01	1	0.00	76.8	-45.67	0.00	0.00	32
32	81	0.4	0.50	-3.01	1	0.00	80.2	-46.04	0.00	0.00	32
33	90	0.4	0.50	-3.01	1	0.00	33.5	-38.46	0.00	-10.00	39
34	79	1.5	0.50	-3.01	1	0.00	62.2	-32.35	-20.00	0.00	24
35	90	0.4	0.50	-3.01	1	0.00	75.3	-45.49	0.00	-5.00	36
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
38	93	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	8
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	44.48
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392

rbouwmeester@rogers.com

Predicted Noise Levels (unmitigated) (Receptor R5)

Day	Ref Sound	Ref	duty	cycle	No.	No.	dist	dist attn	shielding	screen	SPL
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
2	88	0.4	1.00	0.00	1	0.00	5000.0	-81.94			6
3	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
4	81	0.4	1.00	0.00	1	0.00	130.9	-50.30	-5.00		26
5	81	0.4	1.00	0.00	1	0.00	122.8	-49.74	-5.00		26
6	81	0.4	1.00	0.00	1	0.00	115.8	-49.23	-5.00		27
7	81	0.4	1.00	0.00	1	0.00	111.4	-48.90	-5.00		27
8	81	0.4	1.00	0.00	1	0.00	105.0	-48.38	-5.00		28
9	81	0.4	1.00	0.00	1	0.00	99.8	-47.94	-5.00		28
10	81	0.4	1.00	0.00	1	0.00	94.5	-47.47	-5.00		29
11	81	0.4	1.00	0.00	1	0.00	91.3	-47.17	-5.00		29
12	81	0.4	1.00	0.00	1	0.00	84.3	-46.48	-5.00		30
13	81	0.4	1.00	0.00	1	0.00	79.5	-45.97	-5.00		30
14	81	0.4	1.00	0.00	1	0.00	74.7	-45.43	-5.00		31
15	81	0.4	1.00	0.00	1	0.00	70.5	-44.92	-5.00		31
16	81	0.4	1.00	0.00	1	0.00	63.7	-44.04	-5.00		32
17	81	0.4	1.00	0.00	1	0.00	60.1	-43.54	-5.00		32
18	81	0.4	1.00	0.00	1	0.00	57.0	-43.08	-5.00		33
19	81	0.4	1.00	0.00	1	0.00	61.4	-43.72	-5.00		32
20	81	0.4	1.00	0.00	1	0.00	54.4	-42.67	-5.00		33
21	81	0.4	1.00	0.00	1	0.00	52.7	-42.40	-5.00		34
22	81	0.4	1.00	0.00	1	0.00	51.3	-42.16	-5.00		34
23	81	0.4	1.00	0.00	1	0.00	51.5	-42.19	-5.00		34
24	81	0.4	1.00	0.00	1	0.00	52.3	-42.33	-5.00		34
25	81	0.4	1.00	0.00	1	0.00	54.0	-42.61	-5.00		33
26	81	0.4	1.00	0.00	1	0.00	56.0	-42.92	-5.00		33
27	81	0.4	1.00	0.00	1	0.00	58.9	-43.36	-5.00		33
28	81	0.4	1.00	0.00	1	0.00	62.3	-43.85	-5.00		32
29	81	0.4	1.00	0.00	1	0.00	65.9	-44.34	-5.00		32
30	81	0.4	1.00	0.00	1	0.00	70.2	-44.89	-5.00		31
31	81	0.4	1.00	0.00	1	0.00	74.5	-45.40	-5.00		31
32	81	0.4	1.00	0.00	1	0.00	79.0	-45.91	-5.00		30
33	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
34	79	1.5	1.00	0.00	1	0.00	5000.0	-70.46			9
35	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
38	93	0.4	1.00	0.00	1	0.00	5000.0	-81.94			11
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated parapet shielding

Total Sound Pressure Level (dBA) 46.03

Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
2	88	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	5
3	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
4	81	0.4	0.75	-1.25	1	0.00	130.9	-50.30	-5.00	0.00	24
5	81	0.4	0.75	-1.25	1	0.00	122.8	-49.74	-5.00	0.00	25
6	81	0.4	0.75	-1.25	1	0.00	115.8	-49.23	-5.00	0.00	26
7	81	0.4	0.75	-1.25	1	0.00	111.4	-48.90	-5.00	0.00	26
8	81	0.4	0.75	-1.25	1	0.00	105.0	-48.38	-5.00	0.00	26
9	81	0.4	0.75	-1.25	1	0.00	99.8	-47.94	-5.00	0.00	27
10	81	0.4	0.75	-1.25	1	0.00	94.5	-47.47	-5.00	0.00	27
11	81	0.4	0.75	-1.25	1	0.00	91.3	-47.17	-5.00	0.00	28
12	81	0.4	0.75	-1.25	1	0.00	84.3	-46.48	-5.00	0.00	28
13	81	0.4	0.75	-1.25	1	0.00	79.5	-45.97	-5.00	0.00	29
14	81	0.4	0.75	-1.25	1	0.00	74.7	-45.43	-5.00	0.00	29
15	81	0.4	0.75	-1.25	1	0.00	70.5	-44.92	-5.00	0.00	30
16	81	0.4	0.75	-1.25	1	0.00	63.7	-44.04	-5.00	0.00	31
17	81	0.4	0.75	-1.25	1	0.00	60.1	-43.54	-5.00	0.00	31
18	81	0.4	0.75	-1.25	1	0.00	57.0	-43.08	-5.00	0.00	32
19	81	0.4	0.75	-1.25	1	0.00	61.4	-43.72	-5.00	0.00	31
20	81	0.4	0.75	-1.25	1	0.00	54.4	-42.67	-5.00	0.00	32
21	81	0.4	0.75	-1.25	1	0.00	52.7	-42.40	-5.00	0.00	32
22	81	0.4	0.75	-1.25	1	0.00	51.3	-42.16	-5.00	0.00	33
23	81	0.4	0.75	-1.25	1	0.00	51.5	-42.19	-5.00	0.00	33
24	81	0.4	0.75	-1.25	1	0.00	52.3	-42.33	-5.00	0.00	32
25	81	0.4	0.75	-1.25	1	0.00	54.0	-42.61	-5.00	0.00	32
26	81	0.4	0.75	-1.25	1	0.00	56.0	-42.92	-5.00	0.00	32
27	81	0.4	0.75	-1.25	1	0.00	58.9	-43.36	-5.00	0.00	31
28	81	0.4	0.75	-1.25	1	0.00	62.3	-43.85	-5.00	0.00	31
29	81	0.4	0.75	-1.25	1	0.00	65.9	-44.34	-5.00	0.00	30
30	81	0.4	0.75	-1.25	1	0.00	70.2	-44.89	-5.00	0.00	30
31	81	0.4	0.75	-1.25	1	0.00	74.5	-45.40	-5.00	0.00	29
32	81	0.4	0.75	-1.25	1	0.00	79.0	-45.91	-5.00	0.00	29
33	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
34	79	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	7
35	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
38	93	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	10
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	44.78
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
2	88	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	3
3	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
4	81	0.4	0.50	-3.01	1	0.00	130.9	-50.30	-5.00	0.00	23
5	81	0.4	0.50	-3.01	1	0.00	122.8	-49.74	-5.00	0.00	23
6	81	0.4	0.50	-3.01	1	0.00	115.8	-49.23	-5.00	0.00	24
7	81	0.4	0.50	-3.01	1	0.00	111.4	-48.90	-5.00	0.00	24
8	81	0.4	0.50	-3.01	1	0.00	105.0	-48.38	-5.00	0.00	25
9	81	0.4	0.50	-3.01	1	0.00	99.8	-47.94	-5.00	0.00	25
10	81	0.4	0.50	-3.01	1	0.00	94.5	-47.47	-5.00	0.00	26
11	81	0.4	0.50	-3.01	1	0.00	91.3	-47.17	-5.00	0.00	26
12	81	0.4	0.50	-3.01	1	0.00	84.3	-46.48	-5.00	0.00	27
13	81	0.4	0.50	-3.01	1	0.00	79.5	-45.97	-5.00	0.00	27
14	81	0.4	0.50	-3.01	1	0.00	74.7	-45.43	-5.00	0.00	28
15	81	0.4	0.50	-3.01	1	0.00	70.5	-44.92	-5.00	0.00	28
16	81	0.4	0.50	-3.01	1	0.00	63.7	-44.04	-5.00	0.00	29
17	81	0.4	0.50	-3.01	1	0.00	60.1	-43.54	-5.00	0.00	29
18	81	0.4	0.50	-3.01	1	0.00	57.0	-43.08	-5.00	0.00	30
19	81	0.4	0.50	-3.01	1	0.00	61.4	-43.72	-5.00	0.00	29
20	81	0.4	0.50	-3.01	1	0.00	54.4	-42.67	-5.00	0.00	30
21	81	0.4	0.50	-3.01	1	0.00	52.7	-42.40	-5.00	0.00	31
22	81	0.4	0.50	-3.01	1	0.00	51.3	-42.16	-5.00	0.00	31
23	81	0.4	0.50	-3.01	1	0.00	51.5	-42.19	-5.00	0.00	31
24	81	0.4	0.50	-3.01	1	0.00	52.3	-42.33	-5.00	0.00	31
25	81	0.4	0.50	-3.01	1	0.00	54.0	-42.61	-5.00	0.00	30
26	81	0.4	0.50	-3.01	1	0.00	56.0	-42.92	-5.00	0.00	30
27	81	0.4	0.50	-3.01	1	0.00	58.9	-43.36	-5.00	0.00	30
28	81	0.4	0.50	-3.01	1	0.00	62.3	-43.85	-5.00	0.00	29
29	81	0.4	0.50	-3.01	1	0.00	65.9	-44.34	-5.00	0.00	29
30	81	0.4	0.50	-3.01	1	0.00	70.2	-44.89	-5.00	0.00	28
31	81	0.4	0.50	-3.01	1	0.00	74.5	-45.40	-5.00	0.00	28
32	81	0.4	0.50	-3.01	1	0.00	79.0	-45.91	-5.00	0.00	27
33	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
34	79	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	6
35	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
38	93	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	8
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	43.02
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (unmitigated) (Receptor R6)											
Day	Ref Sound	Ref	duty	cycle	No.						
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	1.00	0.00	1	0.00	83.9	-46.43			41
2	88	0.4	1.00	0.00	1	0.00	78.6	-45.87			42
3	87	0.4	1.00	0.00	1	0.00	76.2	-45.60			41
4	81	0.4	1.00	0.00	1	0.00	129.5	-50.20	-5.00		26
5	81	0.4	1.00	0.00	1	0.00	121.8	-49.67	-5.00		26
6	81	0.4	1.00	0.00	1	0.00	115.1	-49.18	-5.00		27
7	81	0.4	1.00	0.00	1	0.00	110.9	-48.86	-5.00		27
8	81	0.4	1.00	0.00	1	0.00	105.0	-48.38	-5.00		28
9	81	0.4	1.00	0.00	1	0.00	100.2	-47.98	-5.00		28
10	81	0.4	1.00	0.00	1	0.00	95.3	-47.54	-5.00		28
11	81	0.4	1.00	0.00	1	0.00	92.4	-47.27	-5.00		29
12	81	0.4	1.00	0.00	1	0.00	86.2	-46.67	-5.00		29
13	81	0.4	1.00	0.00	1	0.00	81.9	-46.22	-5.00		30
14	81	0.4	1.00	0.00	1	0.00	77.8	-45.78	-5.00		30
15	81	0.4	1.00	0.00	1	0.00	74.3	-45.38	-5.00		31
16	81	0.4	1.00	0.00	1	0.00	69.4	-44.79	-5.00		31
17	81	0.4	1.00	0.00	1	0.00	66.7	-44.44	-5.00		32
18	81	0.4	1.00	0.00	1	0.00	64.5	-44.15	-5.00		32
19	81	0.4	1.00	0.00	1	0.00	70.1	-44.87	-5.00		31
20	81	0.4	1.00	0.00	1	0.00	62.8	-43.92	-5.00		32
21	81	0.4	1.00	0.00	1	0.00	62.0	-43.81	-5.00		32
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
26	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
27	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
28	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
29	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
30	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
31	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
32	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
33	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
34	79	1.5	1.00	0.00	1	0.00	5000.0	-70.46			9
35	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
38	93	0.4	1.00	0.00	1	0.00	5000.0	-81.94			11
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated parapet shielding

Total Sound Pressure Level (dBA)	47.70
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Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	83.9	-46.43	0.00	0.00	39
2	88	0.4	0.75	-1.25	1	0.00	78.6	-45.87	0.00	0.00	41
3	87	0.4	0.75	-1.25	1	0.00	76.2	-45.60	0.00	0.00	40
4	81	0.4	0.75	-1.25	1	0.00	129.5	-50.20	-5.00	0.00	25
5	81	0.4	0.75	-1.25	1	0.00	121.8	-49.67	-5.00	0.00	25
6	81	0.4	0.75	-1.25	1	0.00	115.1	-49.18	-5.00	0.00	26
7	81	0.4	0.75	-1.25	1	0.00	110.9	-48.86	-5.00	0.00	26
8	81	0.4	0.75	-1.25	1	0.00	105.0	-48.38	-5.00	0.00	26
9	81	0.4	0.75	-1.25	1	0.00	100.2	-47.98	-5.00	0.00	27
10	81	0.4	0.75	-1.25	1	0.00	95.3	-47.54	-5.00	0.00	27
11	81	0.4	0.75	-1.25	1	0.00	92.4	-47.27	-5.00	0.00	27
12	81	0.4	0.75	-1.25	1	0.00	86.2	-46.67	-5.00	0.00	28
13	81	0.4	0.75	-1.25	1	0.00	81.9	-46.22	-5.00	0.00	29
14	81	0.4	0.75	-1.25	1	0.00	77.8	-45.78	-5.00	0.00	29
15	81	0.4	0.75	-1.25	1	0.00	74.3	-45.38	-5.00	0.00	29
16	81	0.4	0.75	-1.25	1	0.00	69.4	-44.79	-5.00	0.00	30
17	81	0.4	0.75	-1.25	1	0.00	66.7	-44.44	-5.00	0.00	30
18	81	0.4	0.75	-1.25	1	0.00	64.5	-44.15	-5.00	0.00	31
19	81	0.4	0.75	-1.25	1	0.00	70.1	-44.87	-5.00	0.00	30
20	81	0.4	0.75	-1.25	1	0.00	62.8	-43.92	-5.00	0.00	31
21	81	0.4	0.75	-1.25	1	0.00	62.0	-43.81	-5.00	0.00	31
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
26	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
27	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
28	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
29	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
30	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
31	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
32	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
33	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
34	79	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	7
35	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
38	93	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	10
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	46.45
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	83.9	-46.43	0.00	0.00	38
2	88	0.4	0.50	-3.01	1	0.00	78.6	-45.87	0.00	0.00	39
3	87	0.4	0.50	-3.01	1	0.00	76.2	-45.60	0.00	0.00	38
4	81	0.4	0.50	-3.01	1	0.00	129.5	-50.20	-5.00	0.00	23
5	81	0.4	0.50	-3.01	1	0.00	121.8	-49.67	-5.00	0.00	23
6	81	0.4	0.50	-3.01	1	0.00	115.1	-49.18	-5.00	0.00	24
7	81	0.4	0.50	-3.01	1	0.00	110.9	-48.86	-5.00	0.00	24
8	81	0.4	0.50	-3.01	1	0.00	105.0	-48.38	-5.00	0.00	25
9	81	0.4	0.50	-3.01	1	0.00	100.2	-47.98	-5.00	0.00	25
10	81	0.4	0.50	-3.01	1	0.00	95.3	-47.54	-5.00	0.00	25
11	81	0.4	0.50	-3.01	1	0.00	92.4	-47.27	-5.00	0.00	26
12	81	0.4	0.50	-3.01	1	0.00	86.2	-46.67	-5.00	0.00	26
13	81	0.4	0.50	-3.01	1	0.00	81.9	-46.22	-5.00	0.00	27
14	81	0.4	0.50	-3.01	1	0.00	77.8	-45.78	-5.00	0.00	27
15	81	0.4	0.50	-3.01	1	0.00	74.3	-45.38	-5.00	0.00	28
16	81	0.4	0.50	-3.01	1	0.00	69.4	-44.79	-5.00	0.00	28
17	81	0.4	0.50	-3.01	1	0.00	66.7	-44.44	-5.00	0.00	29
18	81	0.4	0.50	-3.01	1	0.00	64.5	-44.15	-5.00	0.00	29
19	81	0.4	0.50	-3.01	1	0.00	70.1	-44.87	-5.00	0.00	28
20	81	0.4	0.50	-3.01	1	0.00	62.8	-43.92	-5.00	0.00	29
21	81	0.4	0.50	-3.01	1	0.00	62.0	-43.81	-5.00	0.00	29
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
26	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
27	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
28	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
29	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
30	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
31	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
32	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
33	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
34	79	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	6
35	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
38	93	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	8
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	44.69
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (unmitigated) (Receptor R7)											
Day	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	1.00	0.00	1	0.00	74.4	-45.39			42
2	88	0.4	1.00	0.00	1	0.00	68.6	-44.69			43
3	87	0.4	1.00	0.00	1	0.00	65.4	-44.27			43
4	81	0.4	1.00	0.00	1	0.00	147.9	-51.36	-5.00		25
5	81	0.4	1.00	0.00	1	0.00	141.2	-50.96	-5.00		25
6	81	0.4	1.00	0.00	1	0.00	135.5	-50.60	-5.00		25
7	81	0.4	1.00	0.00	1	0.00	131.9	-50.36	-5.00		26
8	81	0.4	1.00	0.00	1	0.00	126.9	-50.03	-5.00		26
9	81	0.4	1.00	0.00	1	0.00	123.0	-49.76	-5.00		26
10	81	0.4	1.00	0.00	1	0.00	119.0	-49.47	-5.00		27
11	81	0.4	1.00	0.00	1	0.00	116.8	-49.31	-5.00		27
12	81	0.4	1.00	0.00	1	0.00	111.9	-48.94	-5.00		27
13	81	0.4	1.00	0.00	1	0.00	108.6	-48.68	-5.00		27
14	81	0.4	1.00	0.00	1	0.00	105.5	-48.42	-5.00		28
15	81	0.4	1.00	0.00	1	0.00	103.1	-48.22	-5.00		28
16	81	0.4	1.00	0.00	1	0.00	100.2	-47.98	-5.00		28
17	81	0.4	1.00	0.00	1	0.00	98.4	-47.82	-5.00		28
18	81	0.4	1.00	0.00	1	0.00	96.8	-47.68	-5.00		28
19	81	0.4	1.00	0.00	1	0.00	102.9	-48.21	-5.00		28
20	81	0.4	1.00	0.00	1	0.00	95.6	-47.57	-5.00		28
21	81	0.4	1.00	0.00	1	0.00	95.1	-47.52	-5.00		28
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
26	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
27	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
28	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
29	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
30	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
31	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
32	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
33	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
34	79	1.5	1.00	0.00	1	0.00	5000.0	-70.46			9
35	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
38	93	0.4	1.00	0.00	1	0.00	5000.0	-81.94			11
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated parapet shielding

Total Sound Pressure Level (dBA) 48.06

Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	74.4	-45.39	0.00	0.00	40
2	88	0.4	0.75	-1.25	1	0.00	68.6	-44.69	0.00	0.00	42
3	87	0.4	0.75	-1.25	1	0.00	65.4	-44.27	0.00	0.00	41
4	81	0.4	0.75	-1.25	1	0.00	147.9	-51.36	-5.00	0.00	23
5	81	0.4	0.75	-1.25	1	0.00	141.2	-50.96	-5.00	0.00	24
6	81	0.4	0.75	-1.25	1	0.00	135.5	-50.60	-5.00	0.00	24
7	81	0.4	0.75	-1.25	1	0.00	131.9	-50.36	-5.00	0.00	24
8	81	0.4	0.75	-1.25	1	0.00	126.9	-50.03	-5.00	0.00	25
9	81	0.4	0.75	-1.25	1	0.00	123.0	-49.76	-5.00	0.00	25
10	81	0.4	0.75	-1.25	1	0.00	119.0	-49.47	-5.00	0.00	25
11	81	0.4	0.75	-1.25	1	0.00	116.8	-49.31	-5.00	0.00	25
12	81	0.4	0.75	-1.25	1	0.00	111.9	-48.94	-5.00	0.00	26
13	81	0.4	0.75	-1.25	1	0.00	108.6	-48.68	-5.00	0.00	26
14	81	0.4	0.75	-1.25	1	0.00	105.5	-48.42	-5.00	0.00	26
15	81	0.4	0.75	-1.25	1	0.00	103.1	-48.22	-5.00	0.00	27
16	81	0.4	0.75	-1.25	1	0.00	100.2	-47.98	-5.00	0.00	27
17	81	0.4	0.75	-1.25	1	0.00	98.4	-47.82	-5.00	0.00	27
18	81	0.4	0.75	-1.25	1	0.00	96.8	-47.68	-5.00	0.00	27
19	81	0.4	0.75	-1.25	1	0.00	102.9	-48.21	-5.00	0.00	27
20	81	0.4	0.75	-1.25	1	0.00	95.6	-47.57	-5.00	0.00	27
21	81	0.4	0.75	-1.25	1	0.00	95.1	-47.52	-5.00	0.00	27
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
26	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
27	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
28	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
29	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
30	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
31	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
32	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
33	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
34	79	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	7
35	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
38	93	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	10
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	46.81
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	74.4	-45.39	0.00	0.00	39
2	88	0.4	0.50	-3.01	1	0.00	68.6	-44.69	0.00	0.00	40
3	87	0.4	0.50	-3.01	1	0.00	65.4	-44.27	0.00	0.00	40
4	81	0.4	0.50	-3.01	1	0.00	147.9	-51.36	-5.00	0.00	22
5	81	0.4	0.50	-3.01	1	0.00	141.2	-50.96	-5.00	0.00	22
6	81	0.4	0.50	-3.01	1	0.00	135.5	-50.60	-5.00	0.00	22
7	81	0.4	0.50	-3.01	1	0.00	131.9	-50.36	-5.00	0.00	23
8	81	0.4	0.50	-3.01	1	0.00	126.9	-50.03	-5.00	0.00	23
9	81	0.4	0.50	-3.01	1	0.00	123.0	-49.76	-5.00	0.00	23
10	81	0.4	0.50	-3.01	1	0.00	119.0	-49.47	-5.00	0.00	24
11	81	0.4	0.50	-3.01	1	0.00	116.8	-49.31	-5.00	0.00	24
12	81	0.4	0.50	-3.01	1	0.00	111.9	-48.94	-5.00	0.00	24
13	81	0.4	0.50	-3.01	1	0.00	108.6	-48.68	-5.00	0.00	24
14	81	0.4	0.50	-3.01	1	0.00	105.5	-48.42	-5.00	0.00	25
15	81	0.4	0.50	-3.01	1	0.00	103.1	-48.22	-5.00	0.00	25
16	81	0.4	0.50	-3.01	1	0.00	100.2	-47.98	-5.00	0.00	25
17	81	0.4	0.50	-3.01	1	0.00	98.4	-47.82	-5.00	0.00	25
18	81	0.4	0.50	-3.01	1	0.00	96.8	-47.68	-5.00	0.00	25
19	81	0.4	0.50	-3.01	1	0.00	102.9	-48.21	-5.00	0.00	25
20	81	0.4	0.50	-3.01	1	0.00	95.6	-47.57	-5.00	0.00	25
21	81	0.4	0.50	-3.01	1	0.00	95.1	-47.52	-5.00	0.00	25
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
26	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
27	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
28	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
29	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
30	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
31	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
32	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
33	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
34	79	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	6
35	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
38	93	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	8
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	45.05
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (unmitigated) (Receptor R8)											
Day	Ref Sound	Ref	duty	cycle	No.						
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
2	88	0.4	1.00	0.00	1	0.00	5000.0	-81.94			6
3	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
4	81	0.4	1.00	0.00	1	0.00	169.4	-52.54	-5.00		23
5	81	0.4	1.00	0.00	1	0.00	163.6	-52.23	-5.00		24
6	81	0.4	1.00	0.00	1	0.00	158.6	-51.96	-5.00		24
7	81	0.4	1.00	0.00	1	0.00	155.6	-51.80	-5.00		24
8	81	0.4	1.00	0.00	1	0.00	151.3	-51.56	-5.00		24
9	81	0.4	1.00	0.00	1	0.00	148.0	-51.36	-5.00		25
10	81	0.4	1.00	0.00	1	0.00	144.8	-51.17	-5.00		25
11	81	0.4	1.00	0.00	1	0.00	143.0	-51.07	-5.00		25
12	81	0.4	1.00	0.00	1	0.00	139.0	-50.82	-5.00		25
13	81	0.4	1.00	0.00	1	0.00	136.4	-50.66	-5.00		25
14	81	0.4	1.00	0.00	1	0.00	133.8	-50.49	-5.00		26
15	81	0.4	1.00	0.00	1	0.00	132.0	-50.37	-5.00		26
16	81	0.4	1.00	0.00	1	0.00	130.3	-50.26	-5.00		26
17	81	0.4	1.00	0.00	1	0.00	128.8	-50.16	-5.00		26
18	81	0.4	1.00	0.00	1	0.00	127.6	-50.08	-5.00		26
19	81	0.4	1.00	0.00	1	0.00	133.9	-50.49	-5.00		26
20	81	0.4	1.00	0.00	1	0.00	126.6	-50.01	-5.00		26
21	81	0.4	1.00	0.00	1	0.00	126.3	-49.99	-5.00		26
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
26	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
27	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
28	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
29	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
30	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
31	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
32	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
33	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
34	79	1.5	1.00	0.00	1	0.00	5000.0	-70.46			9
35	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
38	93	0.4	1.00	0.00	1	0.00	5000.0	-81.94			11
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated parapet shielding

Total Sound Pressure Level (dBA)	37.72
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Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
2	88	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	5
3	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
4	81	0.4	0.75	-1.25	1	0.00	169.4	-52.54	-5.00	0.00	22
5	81	0.4	0.75	-1.25	1	0.00	163.6	-52.23	-5.00	0.00	23
6	81	0.4	0.75	-1.25	1	0.00	158.6	-51.96	-5.00	0.00	23
7	81	0.4	0.75	-1.25	1	0.00	155.6	-51.80	-5.00	0.00	23
8	81	0.4	0.75	-1.25	1	0.00	151.3	-51.56	-5.00	0.00	23
9	81	0.4	0.75	-1.25	1	0.00	148.0	-51.36	-5.00	0.00	23
10	81	0.4	0.75	-1.25	1	0.00	144.8	-51.17	-5.00	0.00	24
11	81	0.4	0.75	-1.25	1	0.00	143.0	-51.07	-5.00	0.00	24
12	81	0.4	0.75	-1.25	1	0.00	139.0	-50.82	-5.00	0.00	24
13	81	0.4	0.75	-1.25	1	0.00	136.4	-50.66	-5.00	0.00	24
14	81	0.4	0.75	-1.25	1	0.00	133.8	-50.49	-5.00	0.00	24
15	81	0.4	0.75	-1.25	1	0.00	132.0	-50.37	-5.00	0.00	24
16	81	0.4	0.75	-1.25	1	0.00	130.3	-50.26	-5.00	0.00	24
17	81	0.4	0.75	-1.25	1	0.00	128.8	-50.16	-5.00	0.00	25
18	81	0.4	0.75	-1.25	1	0.00	127.6	-50.08	-5.00	0.00	25
19	81	0.4	0.75	-1.25	1	0.00	133.9	-50.49	-5.00	0.00	24
20	81	0.4	0.75	-1.25	1	0.00	126.6	-50.01	-5.00	0.00	25
21	81	0.4	0.75	-1.25	1	0.00	126.3	-49.99	-5.00	0.00	25
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
26	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
27	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
28	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
29	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
30	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
31	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
32	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
33	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
34	79	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	7
35	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
38	93	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	10
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	36.47
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
2	88	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	3
3	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
4	81	0.4	0.50	-3.01	1	0.00	169.4	-52.54	-5.00	0.00	20
5	81	0.4	0.50	-3.01	1	0.00	163.6	-52.23	-5.00	0.00	21
6	81	0.4	0.50	-3.01	1	0.00	158.6	-51.96	-5.00	0.00	21
7	81	0.4	0.50	-3.01	1	0.00	155.6	-51.80	-5.00	0.00	21
8	81	0.4	0.50	-3.01	1	0.00	151.3	-51.56	-5.00	0.00	21
9	81	0.4	0.50	-3.01	1	0.00	148.0	-51.36	-5.00	0.00	22
10	81	0.4	0.50	-3.01	1	0.00	144.8	-51.17	-5.00	0.00	22
11	81	0.4	0.50	-3.01	1	0.00	143.0	-51.07	-5.00	0.00	22
12	81	0.4	0.50	-3.01	1	0.00	139.0	-50.82	-5.00	0.00	22
13	81	0.4	0.50	-3.01	1	0.00	136.4	-50.66	-5.00	0.00	22
14	81	0.4	0.50	-3.01	1	0.00	133.8	-50.49	-5.00	0.00	23
15	81	0.4	0.50	-3.01	1	0.00	132.0	-50.37	-5.00	0.00	23
16	81	0.4	0.50	-3.01	1	0.00	130.3	-50.26	-5.00	0.00	23
17	81	0.4	0.50	-3.01	1	0.00	128.8	-50.16	-5.00	0.00	23
18	81	0.4	0.50	-3.01	1	0.00	127.6	-50.08	-5.00	0.00	23
19	81	0.4	0.50	-3.01	1	0.00	133.9	-50.49	-5.00	0.00	22
20	81	0.4	0.50	-3.01	1	0.00	126.6	-50.01	-5.00	0.00	23
21	81	0.4	0.50	-3.01	1	0.00	126.3	-49.99	-5.00	0.00	23
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
26	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
27	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
28	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
29	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
30	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
31	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
32	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
33	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
34	79	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	6
35	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
38	93	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	8
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	34.71
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (unmitigated) (Receptor R9)											
Day	Ref Sound	Ref	duty	cycle	No.						
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
2	88	0.4	1.00	0.00	1	0.00	5000.0	-81.94			6
3	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
4	81	0.4	1.00	0.00	1	0.00	180.1	-53.07	-8.00		20
5	81	0.4	1.00	0.00	1	0.00	174.7	-52.80	-8.00		20
6	81	0.4	1.00	0.00	1	0.00	170.1	-52.57	-8.00		20
7	81	0.4	1.00	0.00	1	0.00	167.3	-52.43	-8.00		21
8	81	0.4	1.00	0.00	1	0.00	163.4	-52.22	-8.00		21
9	81	0.4	1.00	0.00	1	0.00	160.4	-52.06	-8.00		21
10	81	0.4	1.00	0.00	1	0.00	157.5	-51.90	-8.00		21
11	81	0.4	1.00	0.00	1	0.00	155.9	-51.82	-8.00		21
12	81	0.4	1.00	0.00	1	0.00	152.3	-51.61	-8.00		21
13	81	0.4	1.00	0.00	1	0.00	150.0	-51.48	-8.00		22
14	81	0.4	1.00	0.00	1	0.00	147.7	-51.35	-8.00		22
15	81	0.4	1.00	0.00	1	0.00	146.2	-51.26	-8.00		22
16	81	0.4	1.00	0.00	1	0.00	144.9	-51.18	-8.00		22
17	81	0.4	1.00	0.00	1	0.00	143.7	-51.11	-8.00		22
18	81	0.4	1.00	0.00	1	0.00	142.6	-51.04	-8.00		22
19	81	0.4	1.00	0.00	1	0.00	149.1	-51.43	-8.00		22
20	81	0.4	1.00	0.00	1	0.00	141.7	-50.99	-8.00		22
21	81	0.4	1.00	0.00	1	0.00	141.5	-50.97	-8.00		22
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
26	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
27	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
28	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
29	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
30	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
31	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
32	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
33	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
34	79	1.5	1.00	0.00	1	0.00	5000.0	-70.46			9
35	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
38	93	0.4	1.00	0.00	1	0.00	5000.0	-81.94			11
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated parapet shielding

Total Sound Pressure Level (dBA) 33.97

Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
2	88	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	5
3	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
4	81	0.4	0.75	-1.25	1	0.00	180.1	-53.07	-8.00	0.00	19
5	81	0.4	0.75	-1.25	1	0.00	174.7	-52.80	-8.00	0.00	19
6	81	0.4	0.75	-1.25	1	0.00	170.1	-52.57	-8.00	0.00	19
7	81	0.4	0.75	-1.25	1	0.00	167.3	-52.43	-8.00	0.00	19
8	81	0.4	0.75	-1.25	1	0.00	163.4	-52.22	-8.00	0.00	20
9	81	0.4	0.75	-1.25	1	0.00	160.4	-52.06	-8.00	0.00	20
10	81	0.4	0.75	-1.25	1	0.00	157.5	-51.90	-8.00	0.00	20
11	81	0.4	0.75	-1.25	1	0.00	155.9	-51.82	-8.00	0.00	20
12	81	0.4	0.75	-1.25	1	0.00	152.3	-51.61	-8.00	0.00	20
13	81	0.4	0.75	-1.25	1	0.00	150.0	-51.48	-8.00	0.00	20
14	81	0.4	0.75	-1.25	1	0.00	147.7	-51.35	-8.00	0.00	20
15	81	0.4	0.75	-1.25	1	0.00	146.2	-51.26	-8.00	0.00	20
16	81	0.4	0.75	-1.25	1	0.00	144.9	-51.18	-8.00	0.00	21
17	81	0.4	0.75	-1.25	1	0.00	143.7	-51.11	-8.00	0.00	21
18	81	0.4	0.75	-1.25	1	0.00	142.6	-51.04	-8.00	0.00	21
19	81	0.4	0.75	-1.25	1	0.00	149.1	-51.43	-8.00	0.00	20
20	81	0.4	0.75	-1.25	1	0.00	141.7	-50.99	-8.00	0.00	21
21	81	0.4	0.75	-1.25	1	0.00	141.5	-50.97	-8.00	0.00	21
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
26	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
27	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
28	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
29	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
30	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
31	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
32	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
33	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
34	79	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	7
35	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
38	93	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	10
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	32.72
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
2	88	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	3
3	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
4	81	0.4	0.50	-3.01	1	0.00	180.1	-53.07	-8.00	0.00	17
5	81	0.4	0.50	-3.01	1	0.00	174.7	-52.80	-8.00	0.00	17
6	81	0.4	0.50	-3.01	1	0.00	170.1	-52.57	-8.00	0.00	17
7	81	0.4	0.50	-3.01	1	0.00	167.3	-52.43	-8.00	0.00	18
8	81	0.4	0.50	-3.01	1	0.00	163.4	-52.22	-8.00	0.00	18
9	81	0.4	0.50	-3.01	1	0.00	160.4	-52.06	-8.00	0.00	18
10	81	0.4	0.50	-3.01	1	0.00	157.5	-51.90	-8.00	0.00	18
11	81	0.4	0.50	-3.01	1	0.00	155.9	-51.82	-8.00	0.00	18
12	81	0.4	0.50	-3.01	1	0.00	152.3	-51.61	-8.00	0.00	18
13	81	0.4	0.50	-3.01	1	0.00	150.0	-51.48	-8.00	0.00	19
14	81	0.4	0.50	-3.01	1	0.00	147.7	-51.35	-8.00	0.00	19
15	81	0.4	0.50	-3.01	1	0.00	146.2	-51.26	-8.00	0.00	19
16	81	0.4	0.50	-3.01	1	0.00	144.9	-51.18	-8.00	0.00	19
17	81	0.4	0.50	-3.01	1	0.00	143.7	-51.11	-8.00	0.00	19
18	81	0.4	0.50	-3.01	1	0.00	142.6	-51.04	-8.00	0.00	19
19	81	0.4	0.50	-3.01	1	0.00	149.1	-51.43	-8.00	0.00	19
20	81	0.4	0.50	-3.01	1	0.00	141.7	-50.99	-8.00	0.00	19
21	81	0.4	0.50	-3.01	1	0.00	141.5	-50.97	-8.00	0.00	19
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
26	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
27	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
28	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
29	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
30	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
31	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
32	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
33	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
34	79	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	6
35	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
38	93	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	8
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	30.95
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (unmitigated) (Receptor R10)											
Day	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
2	88	0.4	1.00	0.00	1	0.00	5000.0	-81.94			6
3	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
4	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
5	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
6	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
7	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
8	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
9	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
10	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
11	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
12	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
13	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
14	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
15	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
16	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
17	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
18	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
19	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
20	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
21	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
26	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
27	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
28	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
29	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
30	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
31	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
32	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
33	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
34	79	1.5	1.00	0.00	1	0.00	5000.0	-70.46			9
35	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	116.9	-49.32	-19.00		22
38	93	0.4	1.00	0.00	1	0.00	59.9	-43.51	-9.00		40
39	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1

*estimated roof edge shielding

Total Sound Pressure Level (dBA) 40.57

Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
2	88	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	5
3	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
4	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
5	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
6	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
7	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
8	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
9	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
10	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
11	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
12	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
13	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
14	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
15	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
16	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
17	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
18	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
19	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
20	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
21	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
26	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
27	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
28	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
29	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
30	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
31	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
32	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
33	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
34	79	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	7
35	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	116.9	-49.32	-19.00	0.00	20
38	93	0.4	0.75	-1.25	1	0.00	59.9	-43.51	-9.00	0.00	39
39	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3

Total Sound Pressure Level (dBA)	39.32
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
2	88	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	3
3	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
4	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
5	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
6	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
7	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
8	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
9	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
10	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
11	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
12	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
13	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
14	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
15	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
16	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
17	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
18	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
19	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
20	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
21	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
26	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
27	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
28	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
29	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
30	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
31	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
32	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
33	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
34	79	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	6
35	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	116.9	-49.32	-19.00	0.00	19
38	93	0.4	0.50	-3.01	1	0.00	59.9	-43.51	-9.00	0.00	37
39	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4

Total Sound Pressure Level (dBA)	37.56
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Stationary Noise Analysis

60 Dean Ave
Barrie

March 2025

R. Bouwmeester & Associates

165 Browning Trail
Barrie, ON L4N 5E7
tel/fax 705-726-3392
rbouwmeester@rogers.com

Predicted Noise Levels (unmitigated) (Receptor R11)											
Day	Ref Sound	Ref	duty	cycle	No.	No.	dist	dist attn	shielding	screen	SPL
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.					
1	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
2	88	0.4	1.00	0.00	1	0.00	5000.0	-81.94			6
3	87	0.4	1.00	0.00	1	0.00	5000.0	-81.94			5
4	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
5	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
6	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
7	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
8	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
9	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
10	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
11	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
12	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
13	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
14	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
15	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
16	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
17	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
18	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
19	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
20	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
21	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
22	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
23	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
24	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
25	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
26	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
27	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
28	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
29	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
30	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
31	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
32	81	0.4	1.00	0.00	1	0.00	5000.0	-81.94			-1
33	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
34	79	1.5	1.00	0.00	1	0.00	5000.0	-70.46			9
35	90	0.4	1.00	0.00	1	0.00	5000.0	-81.94			8
36	69	1.5	1.00	0.00	1	0.00	5000.0	-70.46			-1
37	90	0.4	1.00	0.00	1	0.00	69.9	-44.85	-11.00		34
38	93	0.4	1.00	0.00	1	0.00	34.0	-38.59	-15.00		39
39	69	1.5	1.00	0.00	1	0.00	22.3	-23.44			46

*estimated roof edge shielding

Total Sound Pressure Level (dBA) 46.75

Eve	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
2	88	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	5
3	87	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	4
4	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
5	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
6	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
7	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
8	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
9	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
10	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
11	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
12	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
13	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
14	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
15	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
16	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
17	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
18	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
19	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
20	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
21	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
22	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
23	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
24	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
25	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
26	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
27	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
28	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
29	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
30	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
31	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
32	81	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	-2
33	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
34	79	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	7
35	90	0.4	0.75	-1.25	1	0.00	5000.0	-81.94	0.00	0.00	7
36	69	1.5	0.75	-1.25	1	0.00	5000.0	-70.46	0.00	0.00	-3
37	90	0.4	0.75	-1.25	1	0.00	69.9	-44.85	-11.00	0.00	33
38	93	0.4	0.75	-1.25	1	0.00	34.0	-38.59	-15.00	0.00	38
39	69	1.5	0.75	-1.25	1	0.00	22.3	-23.44	0.00	0.00	44

Total Sound Pressure Level (dBA)	45.50
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Night	Ref Sound	Ref	duty	cycle	No.	No.					
Noise Source	Level dBA	Dist m	cycle	corr.	No.	corr.	dist	dist attn	shielding	screen	SPL
1	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
2	88	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	3
3	87	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	2
4	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
5	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
6	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
7	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
8	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
9	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
10	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
11	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
12	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
13	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
14	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
15	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
16	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
17	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
18	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
19	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
20	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
21	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
22	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
23	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
24	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
25	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
26	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
27	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
28	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
29	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
30	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
31	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
32	81	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	-4
33	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
34	79	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	6
35	90	0.4	0.50	-3.01	1	0.00	5000.0	-81.94	0.00	0.00	5
36	69	1.5	0.50	-3.01	1	0.00	5000.0	-70.46	0.00	0.00	-4
37	90	0.4	0.50	-3.01	1	0.00	69.9	-44.85	-11.00	0.00	31
38	93	0.4	0.50	-3.01	1	0.00	34.0	-38.59	-15.00	0.00	36
39	69	1.5	0.50	-3.01	1	0.00	22.3	-23.44	0.00	0.00	43

Total Sound Pressure Level (dBA)	43.74
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