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**PRELIMINARY  
ENVIRONMENTAL NOISE REPORT  
AND  
LAND USE COMPATIBILITY REPORT**

PROPOSED INDUSTRIAL DEVELOPMENT  
772 WINSTON CHURCHILL BOULEVARD  
TOWN OF OAKVILLE

PREPARED FOR  
772 WINSTON CHURCHILL GP INC.  
C/O IBI GROUP

Revised December 15, 2021  
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File: 21-051



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## SUMMARY

The proposed industrial development is to be located at 772 Winston Churchill Boulevard in the Town of Oakville. The proposed development will consist of two industrial buildings.

The environmental noise guidelines for transportation and stationary noise sources of the Town of Oakville, Region of Halton and Ministry of the Environment, Conservation and Parks (MOE) set out sound level limits for both the indoor (transportation sources only) and outdoor space (both transportation and stationary sources).

The noise sources associated with the proposed buildings are rooftop mechanical equipment, non-refrigerated truck pass-bys and associated back-up beepers, non-refrigerated truck idling, emergency backup generators, as well as impulses associated with the loading/unloading operations and trailer coupling/uncoupling operations at the loading bays and trailer coupling/uncoupling operations at the trailer parking areas.

As the building tenants are not known at this time, tenant-specific information regarding rooftop mechanical equipment associated with the proposed buildings was not available at the time of preparation of this report. Information on equipment proposed for the shell buildings has been included in the analysis. Once tenant-specific information regarding the mechanical equipment becomes available, the analysis may need to be revisited to verify compliance with the applicable sound level limits at the nearby residential receptors, if there is a significant change to what has been considered in this analysis.

Based on the preliminary analysis, the applicable sound level limits are predicted to be exceeded at the nearest sensitive receptor locations; therefore, noise mitigation measures are required.

Garbage collection operations should be limited to daytime hours between 7:00 a.m. and 7:00 p.m., Monday to Friday.

As requested by the municipality, this report also addresses land-use compatibility. The operations are considered a Class II industry as defined by the MOE D-6 Guidelines. The setback requirement of 70 m to any sensitive receptors is met. In addition, as required by D-6, regardless of the setback to the sensitive receptors, the numerical limits of the NPC-300 need to be achieved. With the proposed building orientation and the proposed sound barriers the sound level limits in NPC-300 are predicted to be achieved.

## 1.0 INTRODUCTION

Jade Acoustics Inc. was retained by 772 Winston Churchill GP Inc. (c/o IBI Group) to prepare a Preliminary Environmental Noise Report to investigate the potential impact of external noise sources including transportation and stationary sources on the proposed development, as well as to assess the noise emissions from the proposed development to the satisfaction of the Town of Oakville and Halton Region.

A Preliminary Environmental Noise Report dated June 25, 2021 was prepared by Jade Acoustics Inc. in support of the proposed development. This revised report has been prepared to address review comments from the Town of Oakville. See Appendix D for responses.

The proposed development is identified as:

772 Winston Churchill Boulevard  
Town of Oakville

The proposed development is located southeast of Beryl Road and the CN rail corridor, and southwest of Winston Churchill Boulevard. Surrounding land uses include industrial developments to the northeast and northwest, future industrial developments and existing residential to the southeast, and existing residential developments to the southwest.

The proposed development will consist of two industrial buildings. The tenants of the buildings are not known at this time.

Figure 1 shows the Key Plan. Figure 2 shows the Site Plan of the proposed development. Figures 3 to 8 show the locations of the noise sources analyzed as well as the receiver locations. Figure 9 shows the location of the subject site and associated MOE Guideline D-6 setback distances.

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

- Site plan, architectural plans and architectural elevations for the proposed development dated and received December 15, 2021, prepared by Baldassarra Architects Inc.;
- Site grading plan dated and received December 15, 2021, prepared by A.M. Candaras Associates Inc.;
- Information on truck movements through discussions with IBI Group; and
- Site visit conducted by Jade Acoustics Inc. staff on April 19, 2021.

## 2.0 ENVIRONMENTAL NOISE AND VIBRATION GUIDELINES

The MOE document “Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning, Publication NPC-300”, dated August, 2013, released October 21, 2013 (updated final version # 22) was used for the analysis. A brief summary of the NPC-300 guidelines is given in Appendix A. The guidelines are also summarized below.

For the purpose of this analysis, the area of the proposed development was considered to be a Class 1 Residential Area.

The MOE guidelines require that the sound level due to the stationary source not exceed the ambient sound level due to road traffic in any hour of operation, or the values of 50 dBA between 7:00 a.m. and 11:00 p.m. applicable to any location on the premises of a person including outdoor areas and the plane of any window and 45 dBA between 11:00 p.m. and 7:00 a.m. applicable to the plane of any open window but not to outdoor areas, whichever is higher. Tables C-5, C-6, C-7 and C-8 of NPC-300, included in Appendix A, provide the exclusion limit values of one-hour equivalent sound level (Leq, dBA) and impulsive sound level (LIm, dBAI).

The most critical hour is usually the quietest hour of road traffic in which the stationary source is also operating. If the guidelines are exceeded, the MOE requires mitigation measures, preferably at the source. The sounds from the stationary source are measured in terms of Leq, the energy equivalent continuous sound level over a defined time period (in this case, one hour) and LIm, the logarithmic average of sound levels (impulses) measured using the impulsive settings of sound level meters.

The MOE also has vibration guidelines with respect to stationary sources, NPC-207. These guidelines require that the peak vibration velocities not exceed 0.3 mm/s at the point of reception during the day or night.

The MOE recognizes the need for back-up beepers/alarms as safety devices and, as such, does not have any guidelines or criteria to address these sources.

It should be noted that the MOE guidelines do not require that the source be inaudible but rather that specific sound level limits be achieved.

The Town of Oakville has a by-law to prohibit or regulate noise likely to disturb the inhabitants of the Town, By-law No. 2008-098 (as amended by By-laws No. 2009-081, 2011-100, 2013-028 and 2016-016). The By-law provides qualitative information with respect to sources of noise and prohibitions by time and place. In addition, the Town of Oakville’s noise by-law requires that back-up beepers be assessed.

The Town of Oakville also has an anti-idling by-law to provide for the control of the idling of vehicles, By-law No. 2002-153 (as amended by By-laws No. 2017-11 and 2019-050). The By-law generally prohibits idling of a vehicle while parked or stopped for a duration greater than three minutes, though certain exceptions apply (e.g. emergency situations or if idling is required to support the basic function of the vehicle).

#### MOE Guideline D-6

The D-Series guidelines were developed by the MOE to assess the potential for adverse impacts due to odour, noise, vibration and dust. The purpose of these guidelines is to assess the potential for negative impacts and provide guidance regarding the need for assessment at specific separation distances, as well as to minimize the potential for adverse impact by identifying areas of influence and recommend minimum setback distances. Regardless of whether the recommended setback distances are met, the numerical sound level limits outlined in NPC-300 are still required to be achieved.

NPC-300 guidelines, which are the focus of this report, includes references to the D-Series Guidelines. The D-6 Compatibility tables are provided in Appendix C of this report. The tables outlined in D-6 are based on the classification of industrial/commercial uses with respect to the type of operations. The industrial/commercial uses can have different classifications with respect to odour, noise, vibration and dust.

### **3.0 THE EFFECT OF THE NEIGHBOURHOOD ON THE DEVELOPMENT**

As outlined in MOE Publication NPC-300, the industrial and office space uses proposed within the subject development are not considered to be noise sensitive spaces requiring acoustical assessment. As such, the potential impact of the surrounding transportation and stationary sources on the proposed development have not been considered further in this report.

While the proposed development does not contemplate the inclusion of noise sensitive uses, the permitted uses under the current site zoning notes that certain noise sensitive uses could be permitted within the subject site. It is our understanding that noise sensitive uses are not proposed within the development; however, should noise sensitive uses be proposed within the subject development, an analysis will need to be conducted to ensure compliance with the applicable sound level limits at the noise sensitive receptor locations.

## 4.0 THE EFFECT OF THE DEVELOPMENT ON THE NEIGHBOURHOOD

### Land-Use Compatibility

With respect to the possible noise sources, the proposed development has been considered a Class II facility. Based on the separation distances from the nearby noise sensitive receptor locations to the proposed noise sources, the 70 m separation distance requirement is met. See Figure 9. Further, as is required by NPC-300, the applicable sound level limits are shown to be met at all surrounding noise sensitive receptor locations.

As details of the potential future tenants are not known at this time, should the uses and associated noise sources qualify the subject site as a Class III industrial facility, the separation distances outlined in Guideline D-6 would not be met; however, as previously noted in this report, should significant changes be proposed relative to what has been analyzed, the noise report and analysis would need to be revised to ensure compliance with the applicable sound level limits. As noted above, regardless of whether the recommended setback distances are met, the numerical sound level limits outlined in NPC-300 are still required to be achieved.

### Noise Assessment

Noise sources associated with the proposed industrial buildings include rooftop mechanical equipment, non-refrigerated truck pass-bys and associated back-up beepers, non-refrigerated truck idling, emergency backup generators, as well as impulses associated with the loading/unloading operations and trailer coupling/uncoupling operations at the loading bays and trailer coupling/uncoupling operations at the trailer parking areas.

It should be noted that back-up beepers have been included in the analysis as required by the Town's noise by-law. NPC-300 exempts back-up beepers from the assessment as they are considered a safety measures.

At the time of preparation of this report, tenant specific information regarding mechanical equipment associated with the proposed buildings is not known. Details of the proposed mechanical systems to support the shell building have been included in the analysis.

The rooftop mechanical equipment is not expected to affect the feasibility of the project. However, once final tenant specific mechanical equipment information is available, additional analysis may need to be conducted to ensure compliance with the guidelines at the noise sensitive receptors, should there be significant differences from what was analyzed in this report.

Based on information provided by the client, the proposed development will be comprised of industrial uses with associated office space. It is anticipated that the facility will operate on a 24-hour basis. The analysis has accounted for 36 truck round trips per hour during the worst case hour during daytime, evening and nighttime periods (18 round trips per hour, per building) and assumes the trucks idle for three minutes while on the property, which is the maximum permissible idling time for compliance with the Town of Oakville anti-idling by-law. The back-up beepers associated with truck movements have been included in the analysis, as required by the Town of Oakville noise by-law.

Impulses associated with delivery loading/unloading and trailer coupling/uncoupling have also been accounted for in the analysis.

Sound power levels for the shell building rooftop mechanical equipment, non-refrigerated truck pass-bys and idling, emergency backup generators, back-up beepers, as well as impulses associated with the loading/unloading and coupling/uncoupling operations were based on information from the proponent and other Jade Acoustics Inc. files prepared for similar developments.

A list of the analyzed continuous, impulsive, and emergency noise sources and sound power levels in octave bands is given in Table A below.

Due to the location and orientation relative to the sensitive receptors, vibration associated with operations at the subject site is not expected to be significant at the existing sensitive receptors and was not analyzed further at this time. Once the tenants are known, the potential impact of vibration associated with the specific uses may need to be evaluated to ensure compliance at the sensitive receptors. Should sensitive receptors be proposed within the adjacent employment lands, an analysis should be conducted to ensure the applicable vibration limits are met at the sensitive receptors.

**TABLE A**

**SUMMARY OF NOISE SOURCE INFORMATION**

Noise Source	Source ID	Sound Power Level (PWL), dB re. 10 <sup>-12</sup> watts								
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall dBA/dBAI
Non-Refrigerated Truck Pass-by	TP	97.0	101.0	100.0	97.0	93.0	90.0	83.0	76.0	98.9
Non-Refrigerated Truck Idling	IDLE	93.1	97.1	96.1	93.1	89.1	86.1	79.1	72.1	95.0
Backup Beepers	--	--	--	--	--	112.0	--	--	--	112.0
Lennox HVAC	HVAC	76.0	76.0	79.0	84.0	83.0	79.0	73.0	66.0	88.3
Cambridge Heaters	HEAT	54.2	54.2	57.2	62.2	61.2	57.2	51.2	44.2	66.7
Backup Generator	GEN	77.8	74.8	80.8	84.8	86.8	83.8	81.8	74.8	90.8
Impulses	IMP5	93.0	107.0	103.0	108.0	110.0	104.0	99.0	89.0	112.5 (dBAI)

The critical receptors are the existing residential dwellings, located on either side of Winston Churchill Boulevard, in a southeastern direction from the subject site, as well as the existing residential development to the west/southwest. Two-storey dwellings were modelled at 4.5 m above ground level; bungalow dwellings were modelled at 2.5 m above ground level. The receptors are labelled R1 to R6 on Figures 3 to 8.

The MOE noise guidelines require that the noise from the proposed development not exceed the existing ambient Leq due to road traffic in any hour of operation or the exclusion limits previously discussed in Section 3.0.

For the current analysis, the MOE Class 1 exclusion limits have been used. See Table B and Appendix A for details.

Based on information provided by IBI, the building structures have not been designed to support refrigeration equipment. Therefore, the analysis does not include any refrigeration equipment on the buildings or refrigerated trucks delivering to the site. If this is altered at a later date, the acoustic analysis should be updated.

**TABLE B**

**SUMMARY OF SOUND LEVEL LIMITS**

Receptor	Leq 1 hour (dBA/dBAI)*		
	Daytime 7:00 a.m. to 7:00 p.m.	Evening 7:00 p.m. to 11:00 p.m.	Nighttime 11:00 p.m. to 7:00 a.m.
R1 to R6	50	50	45

\* MOE Class 1 Area exclusion limits.

As noted above, the analyzed noise sources associated with the proposed industrial development are:

- Non-refrigerated truck pass-by and manoeuvring (including back-up beepers);
- Non-refrigerated truck idling;
- Emergency back-up generators;
- Impulses associated with the loading/unloading operations and trailer coupling/uncoupling operations; and
- Rooftop mechanical equipment.

For the rooftop heat/cool units associated with the office areas and the heaters associated with the warehouse areas, duty cycles of 100% for daytime hours, 70% for evening hours, and 40% for nighttime hours were used.

Based on information from IBI Group, 36 non-refrigerated tractor trailer round trips during the daytime, evening and nighttime periods entering the proposed site from Winston Churchill Boulevard, manoeuvring to the loading bay area of either building, and exiting the proposed site on Winston Churchill Boulevard are included in the analysis. The analysis assumes the trucks idle at the loading bays for three minutes each, as per the terms of the Town of Oakville anti-idling by-law. The backup beepers associated with truck maneuvering has also been included in accordance with the Town of Oakville noise by-law; a 17 % (ten minute) duty cycle has been considered.

Screening from proposed buildings within the site has been included in this analysis. The proposed buildings have been modelled to include the height of the low parapets shown on the architectural plans. The higher parapets will provide additional screening of the proposed mechanical equipment; therefore, the current analysis represents a conservative scenario.

Once the final tenant specific mechanical information is available, the noise analysis may need to be updated in order to confirm compliance with the applicable sound level limits, should the design result in significant changes from what has been assessed in this report.

Table A, above, shows the sound power levels for noise sources used in the analysis. Figures 3 to 8 show the locations of the analyzed noise sources.

The sound level in terms of Leq (one hour continuous noise sources) and LIm (impulsive noise sources) were determined for the critical receptors. The CadnaA computer program (Version 2021 MR2), which uses International Standard Analytical Code ISO 9613-2 was used for the analysis.

As per the MOE guidelines, impulsive noise sources were analyzed separately. The impulsive noise associated with the loading bays of the proposed buildings and with the trailer coupling/uncoupling at the trailer parking areas have been analyzed. The modelling included all time periods for the loading/unloading and coupling/uncoupling operations. The impulsive sound level used in the analysis is representative of a typical industrial facility loading/unloading and coupling/uncoupling activities.

As per the MOE guidelines, emergency noise sources were also analyzed separately. The emergency noise sources are the two back-up generators shown on Figures 5 and 8 and are associated with the underground storm pump and sanitary pump. It is our understanding that the generators will only operate during a power loss event and do not serve as the general power source for the pumps. Based on information from the generator supplier, the back-up generators will be housed within Level 1 sound enclosures.

The emergency back-up generators meet the MOE guidelines without any additional mitigation. However, as sound barriers are needed to mitigate other sources, the back-up generators benefit from these barriers.

Tables 1 to 3 and Figures 3 to 5 show the results of the analysis without the addition of mitigation measures.

As can be seen from Tables 1 and 2 and Figures 3 and 4, the unmitigated sound levels are predicted to exceed the MOE guidelines at the critical noise sensitive receptors due to proposed continuous and impulsive noise sources. Therefore, noise mitigation measures are required.

The proposed acoustic barrier shown on Figures 6 to 8 is needed to address the existing residential receptors to the southeast of the subject site (Receptors R1 to R4). It should be noted that this acoustic barrier is not required to meet the applicable sound level limits at the existing residential development to the west/southwest. As shown on Figures 3 to 5; the proposed 4.5 m high screen wall on the north side of Building B and the building locations

and orientation provide sufficient screening to achieve the applicable sound level limits. It should be noted that the 4.5 m high screen wall is required to achieve the sound level limits at the receptor locations and should not be removed or reduced in height or length once constructed.

There are existing industrial developments to the northeast and northwest of the subject site. Based on information on the Town of Oakville website, there is a proposed industrial development at 560 Winston Churchill Boulevard, directly southeast of the subject site, which proposes three warehouse-type buildings. As per NPC-300, these facilities are not considered to be noise sensitive uses and were not considered further in this report.

### Required Noise Mitigation Measures

As shown in Tables 1 and 2 and Figures 3 and 4, certain operations at the subject site are predicted to exceed the applicable sound level limits without the implementation of noise mitigation measures.

In order to achieve the applicable sound level limits for all scenarios analyzed (non-refrigerated truck activities, emergency back-up generators and loading/unloading and coupling/uncoupling impulses), a 4.3 m high acoustic barrier is required along the southeast edge of the storm pond and paved surface, as shown on Figures 6 to 8. As noted above, this proposed mitigation is needed to address exceedance above the sound level limits at Receptors R1 to R4. The proposed 4.5 m screen is required to achieve the sound level limits at receptor locations within the existing residential development to the west/southwest.

The design detail considerations such as, but not limited to, grading and structural implications will need to be confirmed by the appropriate technical discipline prior to implementation. The sound barrier height is to be measured from the proposed finished grade on the northwest side of the fence line (location shown on Figures 6 to 8), as there is a grade change needed to accommodate drainage at this location.

Tables 4 to 6 show the predicted sound levels at the nearby noise sensitive receptors with the implementation of the above noted acoustic barriers, as shown on Figures 6 to 8.

Generally, if a sound barrier is to be used, the sound barrier may be an acoustic fence, berm, or a berm/acoustic fence combination. The acoustic fence must be solid with no gaps along its length and have a minimum surface density of 20 kg/m<sup>2</sup> (4 lb/ft<sup>2</sup>). Appropriate treatment of the sound barrier at all discontinuities and points of termination would be required to ensure that the sound barrier is effective.

If gaps at the bottom of the acoustic fence are necessary for drainage, special design techniques to create interrupted line of sight under the acoustic fence are required. Any

treatment of the drainage proposed for the subject site should be reviewed by Jade Acoustics Inc. prior to its implementation.

As noted above, once the final tenant specific mechanical information for the proposed buildings is available, the analysis may need to be revisited to ensure the applicable sound level criteria are met.

## 5.0 THE EFFECT OF THE DEVELOPMENT ON ITSELF

As discussed in Section 3.0, no noise sensitive uses are proposed within the development. Therefore, based on NPC-300, analyses of the potential noise impact of stationary sources within the proposed development on the development itself are not needed, and, as such, they were not analyzed further.

As the site zoning permits the development of certain noise sensitive uses within the subject site, should a noise sensitive use be proposed in the future, a noise report will need to be prepared to ensure compliance with the applicable noise and vibration guidelines.

## 6.0 CONCLUSION

Based on the preliminary analysis, the Town/Region/MOE sound level limits are predicted to be met at the existing noise sensitive receptors with the incorporation of the mitigation measures options outlined in Section 5.0.

The proposed location of the development, meets the Class II separation distances recommended in the D-6 Guideline.

A detailed noise and vibration report will need to be prepared once all building plans and selection of mechanical equipment have been finalized. Specific tenant information should be assessed in the noise report if this information becomes available.

Prior to issuance of building permits, an acoustical consultant should review the plans and mechanical equipment to ensure compliance with the MOE guidelines.

Prior to final occupancy an acoustical consultant should inspect the installed equipment and mitigation measures, if mitigation is required.

Respectfully submitted,

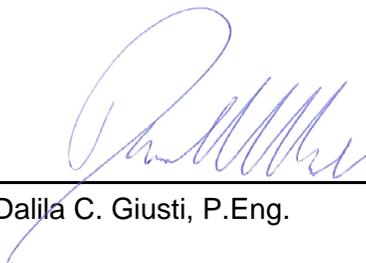
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## 7.0 REFERENCES

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3. “Building Practice Note No. 56: Controlling Sound Transmission into Buildings”, J.D. Quirt, Division of Building Research, National Research Council of Canada, September, 1985.
4. “Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning”, Ontario Ministry of the Environment, Publication NPC-300, August, 2013, released October 21, 2013 (updated final version # 22).
5. “Impulse Vibration in Residential Buildings”, Ontario Ministry of Environment Publication NPC-207 (Draft), November, 1983.
6. Town of Oakville Noise By-law – By-law No. 2008-098 (as amended by By-laws No. 2009-081, 2011-100, 2013-028 and 2016-016), Town of Oakville, July 7, 2008.
7. Town of Oakville Anti-Idling By-law – By-law No. 2002-153 (as amended by By-laws No. 2017-011 and 2019-050), Town of Oakville, August 12, 2002.

**TABLE 1**  
**PROPOSED INDUSTRIAL DEVELOPMENT**  
**772 WINSTON CHURCHILL BOULEVARD**  
**TOWN OF OAKVILLE**

**SUMMARY OF PREDICTED SOUND LEVELS DUE TO CONTINUOUS  
NOISE SOURCES AT THE CLOSEST RESIDENTIAL RECEPTOR LOCATIONS  
WITHOUT MITIGATION MEASURES**

Receptor Location	Daytime Sound Level* Leq 1 hour (dBA)			Evening Sound Level** Leq 1 hour (dBA)			Nighttime Sound Level*** Leq 1 hour (dBA)		
	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance
R1	50	50	No	50	50	No	50	45	Yes
R2	47	50	No	47	50	No	47	45	Yes
R3	48	50	No	48	50	No	48	45	Yes
R4	48	50	No	48	50	No	48	45	Yes
R5	40	50	No	39	50	No	39	45	No
R6	37	50	No	36	50	No	34	45	No

\* (7:00 a.m. to 7:00 p.m.)

\*\* (7:00 p.m. to 11:00 p.m.)

\*\*\* (11:00 p.m. to 7:00 a.m.)

Note: Receiver height has been taken at 4.5 m above grade for two-storey dwellings and at 2.5 m above grade for bungalow dwellings.

**TABLE 2**  
**PROPOSED INDUSTRIAL DEVELOPMENT**  
**772 WINSTON CHURCHILL BOULEVARD**  
**TOWN OF OAKVILLE**

**SUMMARY OF PREDICTED SOUND LEVELS DUE TO IMPULSIVE  
NOISE SOURCES AT THE CLOSEST RESIDENTIAL RECEPTOR LOCATIONS  
WITHOUT MITIGATION MEASURES**

Receptor Location	Daytime Sound Level* Leq 1 hour (dBA)			Evening Sound Level** Leq 1 hour (dBA)			Nighttime Sound Level*** Leq 1 hour (dBA)		
	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance
R1	51	50	Yes	51	50	Yes	51	45	Yes
R2	48	50	No	48	50	No	48	45	Yes
R3	48	50	No	48	50	No	48	45	Yes
R4	49	50	No	49	50	No	49	45	Yes
R5	36	50	No	36	50	No	36	45	No
R6	36	50	No	36	50	No	36	45	No

\* (7:00 a.m. to 7:00 p.m.)

\*\* (7:00 p.m. to 11:00 p.m.)

\*\*\* (11:00 p.m. to 7:00 a.m.)

Note: Receiver height has been taken at 4.5 m above grade for two-storey dwellings and at 2.5 m above grade for bungalow dwellings.

**TABLE 3**  
**PROPOSED INDUSTRIAL DEVELOPMENT**  
**772 WINSTON CHURCHILL BOULEVARD**  
**TOWN OF OAKVILLE**

**SUMMARY OF PREDICTED SOUND LEVELS DUE TO EMERGENCY  
NOISE SOURCES AT THE CLOSEST RESIDENTIAL RECEPTOR LOCATIONS  
WITHOUT MITIGATION MEASURES**

Receptor Location	Daytime Sound Level* Leq 1 hour (dBA)			Evening Sound Level** Leq 1 hour (dBA)			Nighttime Sound Level*** Leq 1 hour (dBA)		
	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance
R1	39	50	No	39	50	No	39	45	No
R2	35	50	No	35	50	No	35	45	No
R3	36	50	No	36	50	No	36	45	No
R4	37	50	No	37	50	No	37	45	No
R5	35	50	No	35	50	No	35	45	No
R6	32	50	No	32	50	No	32	45	No

\* (7:00 a.m. to 7:00 p.m.)

\*\* (7:00 p.m. to 11:00 p.m.)

\*\*\* (11:00 p.m. to 7:00 a.m.)

Note: Receiver height has been taken at 4.5 m above grade for two-storey dwellings and at 2.5 m above grade for bungalow dwellings.

**TABLE 4**  
**PROPOSED INDUSTRIAL DEVELOPMENT**  
**772 WINSTON CHURCHILL BOULEVARD**  
**TOWN OF OAKVILLE**

**SUMMARY OF PREDICTED SOUND LEVELS DUE TO CONTINUOUS  
NOISE SOURCES AT THE CLOSEST RESIDENTIAL RECEPTOR LOCATIONS  
WITH MITIGATION MEASURES**

Receptor Location	Daytime Sound Level*			Evening Sound Level**			Nighttime Sound Level***		
	Leq 1 hour (dBA)			Leq 1 hour (dBA)			Leq 1 hour (dBA)		
	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance
R1	45	50	No	45	50	No	45	45	No
R2	42	50	No	41	50	No	41	45	No
R3	42	50	No	42	50	No	42	45	No
R4	43	50	No	42	50	No	42	45	No
R5	40	50	No	39	50	No	39	45	No
R6	37	50	No	36	50	No	34	45	No

\* (7:00 a.m. to 7:00 p.m.)

\*\* (7:00 p.m. to 11:00 p.m.)

\*\*\* (11:00 p.m. to 7:00 a.m.)

Note: Receiver height has been taken at 4.5 m above grade for two-storey dwellings and at 2.5 m above grade for bungalow dwellings.

**TABLE 5**  
**PROPOSED INDUSTRIAL DEVELOPMENT**  
**772 WINSTON CHURCHILL BOULEVARD**  
**TOWN OF OAKVILLE**

**SUMMARY OF PREDICTED SOUND LEVELS DUE TO IMPULSIVE  
NOISE SOURCES AT THE CLOSEST RESIDENTIAL RECEPTOR LOCATIONS  
WITH MITIGATION MEASURES**

Receptor Location	Daytime Sound Level* Leq 1 hour (dBA)			Evening Sound Level** Leq 1 hour (dBA)			Nighttime Sound Level*** Leq 1 hour (dBA)		
	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance
R1	45	50	No	45	50	No	45	45	No
R2	42	50	No	42	50	No	42	45	No
R3	41	50	No	41	50	No	41	45	No
R4	42	50	No	42	50	No	42	45	No
R5	36	50	No	36	50	No	36	45	No
R6	36	50	No	36	50	No	36	45	No

\* (7:00 a.m. to 7:00 p.m.)

\*\* (7:00 p.m. to 11:00 p.m.)

\*\*\* (11:00 p.m. to 7:00 a.m.)

Note: Receiver height has been taken at 4.5 m above grade for two-storey dwellings and at 2.5 m above grade for bungalow dwellings.

**TABLE 6**  
**PROPOSED INDUSTRIAL DEVELOPMENT**  
**772 WINSTON CHURCHILL BOULEVARD**  
**TOWN OF OAKVILLE**

**SUMMARY OF PREDICTED SOUND LEVELS DUE TO EMERGENCY  
NOISE SOURCES AT THE CLOSEST RESIDENTIAL RECEPTOR LOCATIONS  
WITH MITIGATION MEASURES**

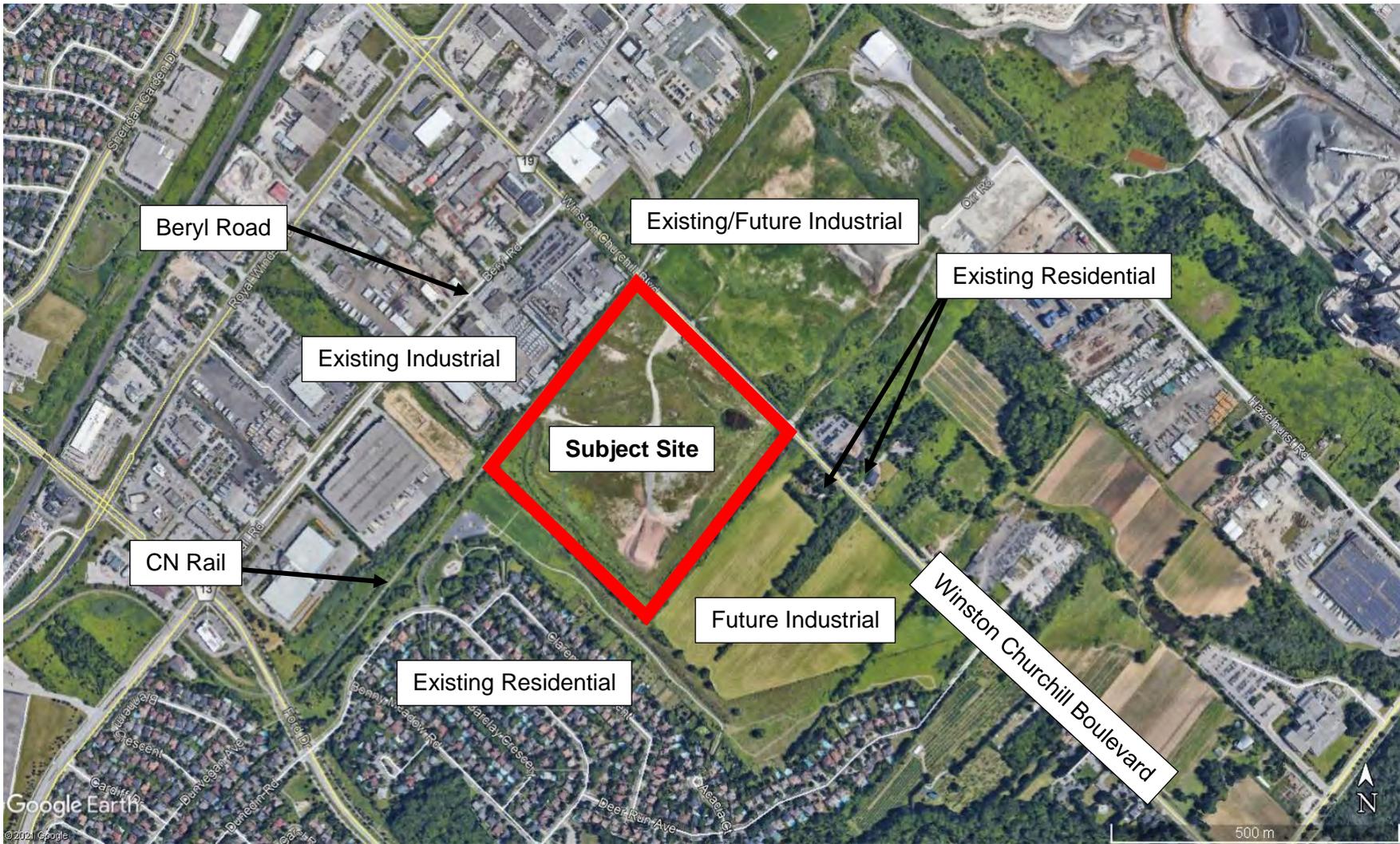
Receptor Location	Daytime Sound Level*			Evening Sound Level**			Nighttime Sound Level***		
	Leq 1 hour (dBAI)			Leq 1 hour (dBAI)			Leq 1 hour (dBAI)		
	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance	Predicted	Limit	Exceedance
R1	32	50	No	32	50	No	32	45	No
R2	29	50	No	29	50	No	29	45	No
R3	30	50	No	30	50	No	30	45	No
R4	30	50	No	30	50	No	30	45	No
R5	35	50	No	35	50	No	35	45	No
R6	32	50	No	32	50	No	32	45	No

\* (7:00 a.m. to 7:00 p.m.)

\*\* (7:00 p.m. to 11:00 p.m.)

\*\*\* (11:00 p.m. to 7:00 a.m.)

Note: Receiver height has been taken at 4.5 m above grade for two-storey dwellings and at 2.5 m above grade for bungalow dwellings.



N.T.S.

**Proposed Industrial Development  
772 Winston Churchill Boulevard  
Town of Oakville**

**Date: December 2021**

**File: 21-051**

**KEY PLAN  
FIGURE 1**



EXISTING/FUTURE INDUSTRIAL



EXISTING RESIDENTIAL

WINSTON CHURCHILL BOULEVARD

SWM POND

BUILDING A

EXISTING INDUSTRIAL

CN RAIL

FUTURE INDUSTRIAL

BUILDING B

N.T.S.

Proposed Industrial Development  
772 Winston Churchill Boulevard  
Town of Oakville

Date: December 2021

Our File: 21-051

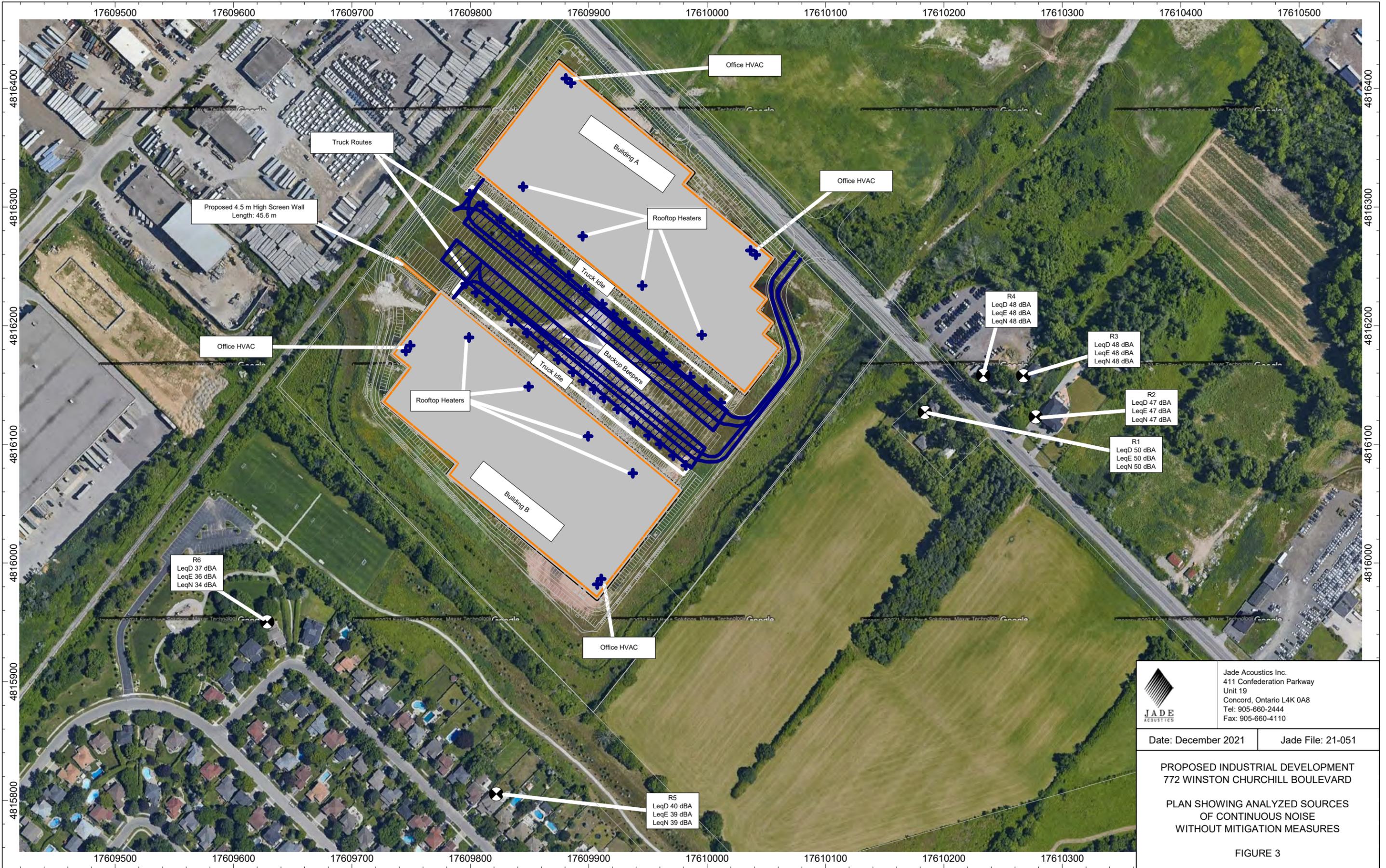


**JADE**  
ACOUSTICS

SITE PLAN

FIGURE 2

EXISTING RESIDENTIAL



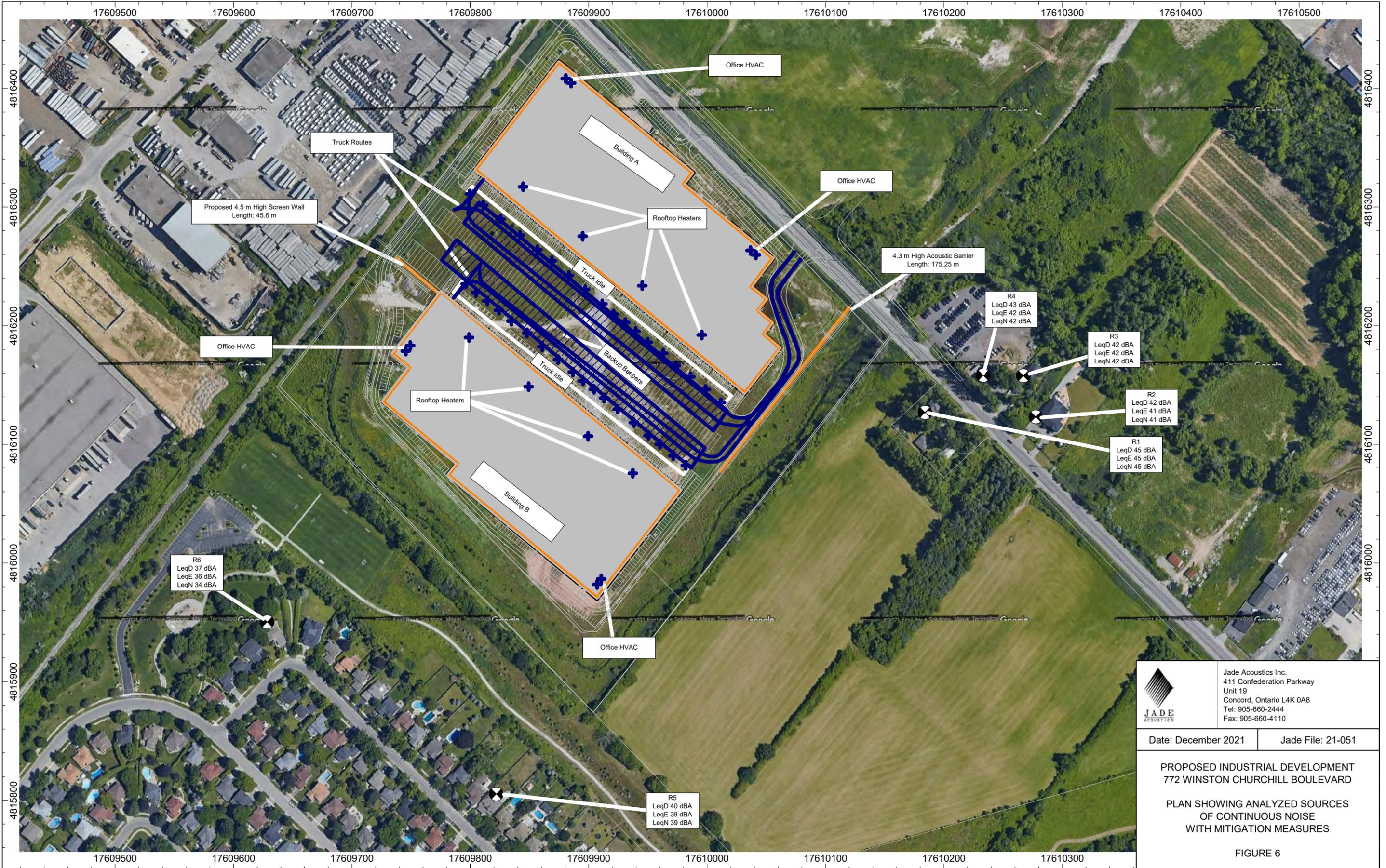
 <p>Jade Acoustics Inc. 411 Confederation Parkway Unit 19 Concord, Ontario L4K 0A8 Tel: 905-660-2444 Fax: 905-660-4110</p>	Date: December 2021	Jade File: 21-051
	<p><b>PROPOSED INDUSTRIAL DEVELOPMENT 772 WINSTON CHURCHILL BOULEVARD</b></p> <p><b>PLAN SHOWING ANALYZED SOURCES OF CONTINUOUS NOISE WITHOUT MITIGATION MEASURES</b></p>	
<p>FIGURE 3</p>		



	Jade Acoustics Inc. 411 Confederation Parkway Unit 19 Concord, Ontario L4K 0A8 Tel: 905-660-2444 Fax: 905-660-4110
	Date: December 2021      Jade File: 21-051
<b>PROPOSED INDUSTRIAL DEVELOPMENT          772 WINSTON CHURCHILL BOULEVARD</b>  <b>PLAN SHOWING ANALYZED SOURCES          OF IMPULSIVE NOISE          WITHOUT MITIGATION MEASURES</b>	
FIGURE 4	



 <p>Jade Acoustics Inc. 411 Confederation Parkway Unit 19 Concord, Ontario L4K 0A8 Tel: 905-660-2444 Fax: 905-660-4110</p>	Date: December 2021	Jade File: 21-051
	<p>PROPOSED INDUSTRIAL DEVELOPMENT 772 WINSTON CHURCHILL BOULEVARD</p> <p>PLAN SHOWING ANALYZED SOURCES OF EMERGENCY NOISE WITHOUT MITIGATION MEASURES</p> <p>FIGURE 5</p>	




 Jade Acoustics Inc.  
 411 Confederation Parkway  
 Unit 19  
 Concord, Ontario L4K 0A8  
 Tel: 905-660-2444  
 Fax: 905-660-4110

Date: December 2021      Jade File: 21-051

**PROPOSED INDUSTRIAL DEVELOPMENT**  
**772 WINSTON CHURCHILL BOULEVARD**  
**PLAN SHOWING ANALYZED SOURCES**  
**OF CONTINUOUS NOISE**  
**WITH MITIGATION MEASURES**

FIGURE 6




Jade Acoustics Inc.  
411 Confederation Parkway  
Unit 19  
Concord, Ontario L4K 0A8  
Tel: 905-660-2444  
Fax: 905-660-4110

Date: December 2021      Jade File: 21-051

**PROPOSED INDUSTRIAL DEVELOPMENT  
772 WINSTON CHURCHILL BOULEVARD**

**PLAN SHOWING ANALYZED SOURCES  
OF IMPULSIVE NOISE  
WITH MITIGATION MEASURES**

FIGURE 7



Proposed 4.5 m High Screen Wall  
Length: 45.6 m

Backup Generator - Storm Pump

4.3 m High Acoustic Barrier  
Length: 175.25 m

R4  
LeqD 30 dBA  
LeqE 30 dBA  
LeqN 30 dBA

R3  
LeqD 30 dBA  
LeqE 30 dBA  
LeqN 30 dBA

R2  
LeqD 29 dBA  
LeqE 29 dBA  
LeqN 29 dBA

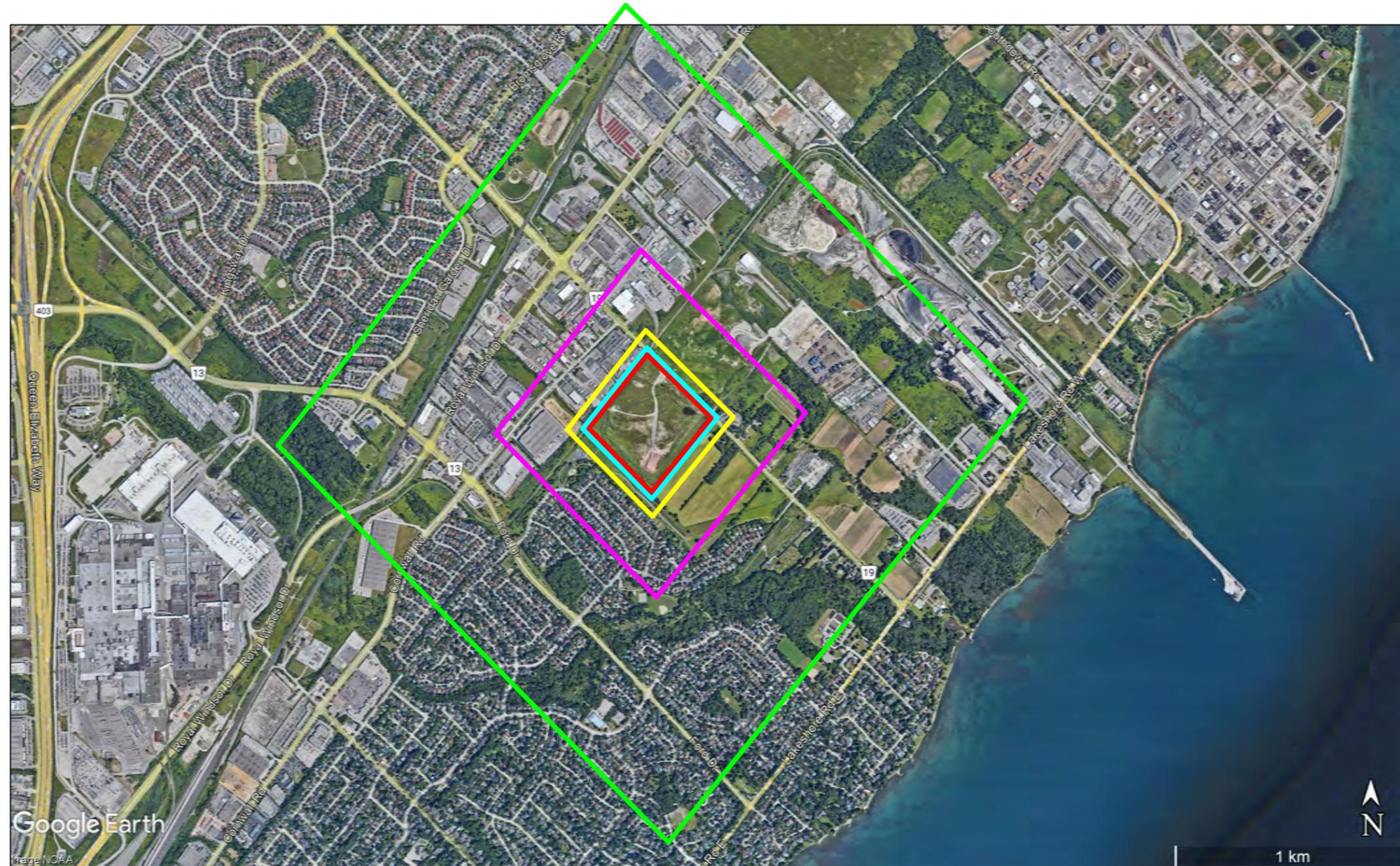
R1  
LeqD 32 dBA  
LeqE 32 dBA  
LeqN 32 dBA

R6  
LeqD 32 dBA  
LeqE 32 dBA  
LeqN 32 dBA

Backup Generator - Sanitary Pump

R5  
LeqD 35 dBA  
LeqE 35 dBA  
LeqN 35 dBA

	Jade Acoustics Inc. 411 Confederation Parkway Unit 19 Concord, Ontario L4K 0A8 Tel: 905-660-2444 Fax: 905-660-4110	
	Date: December 2021	Jade File: 21-051
<b>PROPOSED INDUSTRIAL DEVELOPMENT          772 WINSTON CHURCHILL BOULEVARD</b>		
<b>PLAN SHOWING ANALYZED SOURCES          OF EMERGENCY NOISE          WITH MITIGATION MEASURES</b>		
FIGURE 8		



**LEGEND:**

- Subject Site
- 20 m
- 70 m
- 300 m
- 1,000 m

N.T.S.

Proposed Industrial Development  
772 Winston Churchill Boulevard  
Town of Oakville

Date: December 2021

Our File: 21-051



PLAN SHOWING MOE  
GUIDELINE D-6  
SETBACK DISTANCES

FIGURE 9

## APPENDIX A

### ENVIRONMENTAL NOISE CRITERIA

**ONTARIO MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MOE)**

Reference: "Environmental Noise Guidelines Stationary and Transportation Sources – Approval and Planning", Publication NPC-300, August, 2013, released October 21, 2013 (updated final version # 22).

**SOUND LEVEL CRITERIA FOR ROAD AND RAIL NOISE**

**TABLE C-1**

**Sound Level Limit for Outdoor Living Areas**

**Road and Rail**

<b>Time Period</b>	<b>Leq (16) (dBA)</b>
16 hr, 07:00 - 23:00	55

**TABLE C-2**

**Indoor Sound Level Limits**

**Road and Rail**

<b>Type of Space</b>	<b>Time Period</b>	<b>Leq (dBA)</b>	
		<b>Road</b>	<b>Rail</b>
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40
	23:00 – 07:00	40	35

## SOUND LEVEL CRITERIA FOR AIRCRAFT NOISE

**TABLE C-3**

### Outdoor Aircraft Noise Limit

Time Period	NEF/NEP
24-hour	30

**TABLE C-4**

### Indoor Aircraft Noise Limit (Applicable over 24-hour period)

Type of Space	Indoor NEF/NEP*
Living/dining/den areas of residences, hospitals, nursing/retirement homes, schools, daycare centres, etc.	5
Sleeping Quarters	0

\* The indoor NEF/NEP values in Table C-4 are used to determine acoustical insulation requirements based on the NEF/NEP contour maps.

## SOUND LEVEL CRITERIA FOR STATIONARY SOURCES

**TABLE C-5**

### Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA) Outdoor Points of Reception

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	55
19:00 – 23:00	50	45	40	55

**TABLE C-6**

**Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA)  
Plane of Window of Noise Sensitive Spaces**

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	60
19:00 – 23:00	50	50	40	60
23:00 – 07:00	45	45	40	55

**TABLE C-7**

**Exclusion Limit Values for Impulsive Sound Level (L<sub>LM</sub>, dBAI)  
Outdoor Points of Reception**

Time of Day	Actual Number of Impulses in Period of One-Hour	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 23:00	9 or more	50	50	45	55
	7 to 8	55	55	50	60
	5 to 6	60	60	55	65
	4	65	65	60	70
	3	70	70	65	75
	2	75	75	70	80
	1	80	80	75	85

**TABLE C-8**

**Exclusion Limit Values of Impulsive Sound Level (L<sub>LM</sub>, dBAI)  
Plane of Window - Noise Sensitive Spaces (Day/Night)**

<b>Actual Number of Impulses in Period of One-Hour</b>	<b>Class 1 Area (07:00-23:00)/ (23:00-07:00)</b>	<b>Class 2 Area (07:00-23:00)/ (23:00-07:00)</b>	<b>Class 3 Area (07:00-19:00)/ (19:00-07:00)</b>	<b>Class 4 Area (07:00-23:00)/ (23:00-07:00)</b>
9 or more	50/45	50/45	45/40	60/55
7 to 8	55/50	55/50	50/45	65/60
5 to 6	60/55	60/55	55/50	70/65
4	65/60	65/60	60/55	75/70
3	70/65	70/65	65/60	80/75
2	75/70	75/70	70/65	85/80
1	80/75	80/75	75/70	90/85

**SUPPLEMENTARY SOUND LEVEL LIMITS**

Indoor limits for transportation sources applicable to noise sensitive land uses are specified in Table C-2 and Table C-4. Table C-9 and Table C-10 are expanded versions of Table C-2 and Table C-4, and present guidelines for acceptable indoor sound levels that are extended to land uses and developments which are not normally considered noise sensitive. The specified values are maximum sound levels and apply to the indicated indoor spaces with the windows and doors closed. The sound level limits in Table C-9 and Table C-10 are presented as information, for good-practice design objectives.

**TABLE C-9****Supplementary Indoor Sound Level Limits  
Road and Rail**

Type of Space	Time Period	Leq (Time Period) (dBA)	
		Road	Rail
General offices, reception areas, retail stores, etc.	16 hours between 07:00 – 23:00	50	45
Living/dining areas of residences, hospitals, schools, nursing/retirement homes, daycare centres, theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	16 hours between 07:00 – 23:00	45	40
Sleeping quarters of hotels/motels	8 hours between 23:00 – 07:00	45	40
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	8 hours between 23:00 – 07:00	40	35

**TABLE C-10****Supplementary Indoor Aircraft Noise Limit  
(Applicable over 24-hour period)**

Type of Space	Indoor NEF/NEP*
General offices, reception areas, retail stores, etc.	15
Individual or semi-private offices, conference rooms, etc.	10
Living/dining areas of residences, sleeping quarters of hotels/motels, theatres, libraries, schools, daycare centres, places of worship, etc.	5
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	0

- \* The indoor NEF/NEP values in Table C-10 are not obtained from NEF/NEP contour maps. The values are representative of the indoor sound levels and are used as assessment criteria for the evaluation of acoustical insulation requirements.

## APPENDIX B

### SAMPLE CADNAA CALCULATIONS

Point sources

Name	M.	ID	Result: PWL			Lw / U	Type	Value	Correction			Sound Reduction		Attenuation			Operating Time			K0	Freq.	Direct.	Height	Coordinates		
			Day (dB(A))	Evening (dB(A))	Night (dB(A))				norm.	Day (dB(A))	Evening (dB(A))	Night (dB(A))	α	Area (m²)	Day (min)	Special (min)	Night (min)	(dB)	(Hz)					(m)	X (m)	Y (m)
Cambridge Water		1000000000	66.7	66.7	66.7	Lw	HEAT		0	0	0					60	42	24	0		(none)	1.57	g	17609844.6	4816317.06	110.27
Cambridge Water		1000000000	66.7	66.7	66.7	Lw	HEAT		0	0	0					60	42	24	0		(none)	1.57	g	17609894.9	4816275.4	110.27
Cambridge Water		1000000000	66.7	66.7	66.7	Lw	HEAT		0	0	0					60	42	24	0		(none)	1.57	g	17609945.1	4816233.75	110.27
Cambridge Water		1000000000	66.7	66.7	66.7	Lw	HEAT		0	0	0					60	42	24	0		(none)	1.57	g	17609995.5	4816192.15	110.27
Cambridge Water		1000000000	66.7	66.7	66.7	Lw	HEAT		0	0	0					60	42	24	0		(none)	1.57	g	17609798.9	4816190.07	107.77
Cambridge Water		1000000000	66.7	66.7	66.7	Lw	HEAT		0	0	0					60	42	24	0		(none)	1.57	g	17609849.3	4816148.54	107.77
Cambridge Water		1000000000	66.7	66.7	66.7	Lw	HEAT		0	0	0					60	42	24	0		(none)	1.57	g	17609899.5	4816106.75	107.77
Cambridge Water		1000000000	66.7	66.7	66.7	Lw	HEAT		0	0	0					60	42	24	0		(none)	1.57	g	17609937.2	4816075.62	107.77
Genset - Sanitary Pump	+	10002001	90.8	90.8	90.8	Lw	GEN		0	0	0								0		(none)	1.46	r	17609889.6	4815955.11	96.6
Genset - Storm Pump	+	10002001	90.8	90.8	90.8	Lw	GEN		0	0	0								0		(none)	1.46	r	17610046.7	4816141.59	96.07
Office HVAC Unit		1000000000	88.5	88.5	88.5	Lw	HVAC		0	0	0					60	42	24	0		(none)	1.52	g	17609880.6	4816408.25	110.22
Office HVAC Unit		1000000000	88.5	88.5	88.5	Lw	HVAC		0	0	0					60	42	24	0		(none)	1.52	g	17609885	4816404.37	110.22
Office HVAC Unit		1000000000	88.5	88.5	88.5	Lw	HVAC		0	0	0					60	42	24	0		(none)	1.52	g	17610041.2	4816259.6	110.22
Office HVAC Unit		1000000000	88.5	88.5	88.5	Lw	HVAC		0	0	0					60	42	24	0		(none)	1.52	g	17610036.6	4816263.3	110.22
Office HVAC Unit		1000000000	88.5	88.5	88.5	Lw	HVAC		0	0	0					60	42	24	0		(none)	1.52	g	17609745.5	4816178.65	107.72
Office HVAC Unit		1000000000	88.5	88.5	88.5	Lw	HVAC		0	0	0					60	42	24	0		(none)	1.52	g	17609749.3	4816183.34	107.72
Office HVAC Unit		1000000000	88.5	88.5	88.5	Lw	HVAC		0	0	0					60	42	24	0		(none)	1.52	g	17609907.2	4815981.98	107.72
Office HVAC Unit		1000000000	88.5	88.5	88.5	Lw	HVAC		0	0	0					60	42	24	0		(none)	1.52	g	17609910.5	4815986.5	107.72
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17610011.7	4816135.03	95.27
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609799.5	4816310.95	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609911.5	4816218.28	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609856.5	4816263.95	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609962.9	4816176.61	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609825.5	4816289.95	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609883.2	4816242.28	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609939.6	4816195.27	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609985.9	4816156.94	95.29
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609810.5	4816305.61	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609841.9	4816276.28	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609868.9	4816254.61	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609896.9	4816265.61	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609920.9	4816209.61	95.29
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609949.9	4816185.94	95.29
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609973.6	4816166.27	95.27
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609998.9	4816146.27	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609980.9	4816202.61	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609796.1	4816235.27	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609961.5	4816080.17	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609886.6	4816160.93	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609834.7	4816203.77	95.29
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609998	4816118.3	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609814.4	4816220.78	95.29
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609960.9	4816182.35	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609913.1	4816139.09	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609960.1	4816100.03	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609804.7	4816227.92	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609824.2	4816213.01	95.29
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609848	4816193.9	95.27
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609874	4816171.43	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609895	4816153.44	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609924.4	4816129.64	95.3
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609950.4	4816107.38	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5	r	17609971.4	4816090.36	95.31
Truck idle		1000000000	95	95	95	Lw	IDLE		0	0	0					3	3	3	0		(none)	1.5</				

Line sources

Name	M.	ID	Result: PWL			Result: PWL'			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Mowing Pt. 5c			
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	r	Area		Day	Special	Night				Number			Speed
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(dBA)	(dBA)	(dBA)	(dBA)	(m <sup>2</sup> )		(min)	(min)	(min)				(dB)	(Hz)	Day	Evening
Truck Route Bldg A		100000001	101.4	101.4	101.4	71.4	71.4	71.4	PWL-Pt	TP			0	0	0						0		(none)	18	18	18	10
Truck Route Bldg B		100000001	101.4	101.4	101.4	71.4	71.4	71.4	PWL-Pt	TP			0	0	0						0		(none)	18	18	18	10

Area sources

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li		Correction			Sound Reduction		Attenuation			Operating Time			KD	Freq.	Direct.	Mowing Pl. 5c				
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	r	Area	Day	Special	Night	Day	Special				Night	Number	Day	Evening	Night
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(dBA)	(dBA)	(dBA)	(dBA)	(m <sup>2</sup> )	(min)	(min)	(min)	(dB)	(Hz)								
Trailer Storage Area	-	0001021	106.5	106.5	106.5	77.5	77.5	77.5	Lw	HMPS-10*LOG10(4)		0	0	0								0		(none)					
Trailer Storage Area	-	0001021	106.5	106.5	106.5	69.5	69.5	69.5	Lw	HMPS-10*LOG10(4)		0	0	0								0		(none)					
Loading Building A	-	0001021	106.5	106.5	106.5	69.4	69.4	69.4	Lw	HMPS-10*LOG10(4)		0	0	0								0		(none)					
Loading Building B	-	0001021	106.5	106.5	106.5	69.9	69.9	69.9	Lw	HMPS-10*LOG10(4)		0	0	0								0		(none)					
Backup Beepers		000000021	109	109	109	71.4	71.4	71.4	Lw	112-10*LOG10(2)		0	0	0							10	10	10	0	1000	(none)			
Backup Beepers		000000021	109	109	109	71.4	71.4	71.4	Lw	112-10*LOG10(2)		0	0	0							10	10	10	0	1000	(none)			

Receivers

Name	M.	ID	Level Lr			Limit Value			Land Use			Height		Coordinates		
			Day (LBA)	Night (LBA)	Evening (LBA)	Day (LBA)	Night (LBA)	Evening (LBA)	Type	Auto	Noise Type	(m)		X (m)	Y (m)	Z (m)
R1		011001	45.3	45	45.1	0	0	0	r		Total	4.5		17610183.9	4816176.88	99.42
R2		011001	41.6	41.1	41.3	0	0	0	r		Total	4.5		17610277.5	4816123.1	98.5
R3		011001	42	41.7	41.9	0	0	0	r		Total	2.5		17610267.1	4816157.82	96.58
R4		011001	42.6	42.3	42.5	0	0	0	r		Total	2.5		17610233.2	4816158.08	96.66
R5		011001	39.8	38.7	39.3	0	0	0	r		Total	4.5		17609821.9	4815805.33	99.26
R6		011001	37.3	34.5	36.1	0	0	0	r		Total	4.5		17609628.4	4815950.37	100.2

Screens

Name	M.	ID	Absorption		Z Ext. (m)	Cantilever		Height	
			left	right		horz. (m)	vert. (m)	Begin (m)	End (m)
4.5m High Proposed Screens		03000	0.21	0.21				4.5	f
PA Barrier - 4.5m		0301000	0.21	0.21				4.3	f
Building A Low Parapet		03000	0.21	0.21				0.87	e
Building B Low Parapet		03000	0.21	0.21				0.26	e

*Buildings*

Name	M.	ID	RB	Residents	Absorption	Height
						Begin
						(m)
Building A		02001		0	0.37	12.5
Building B		02001		0	0.37	11

## APPENDIX C

### ENVIRONMENTAL NOISE CRITERIA D-6 GUIDELINES

**GUIDELINE D-6 POTENTIAL INFLUENCE AREAS AND RECOMMENDED  
MINIMUM SEPARATION SISTICS FOR INDUSTRIAL LAND USES**

<b>INDUSTRIAL CLASSIFICATION</b>	<b>AREA OF INFLUENCE</b>	<b>RECOMMENDED MINIMUM SEPARATION DISTANCE</b>
Class 1 – Light Industrial	70 m	20 m
Class 2 – Medium Industrial	300 m	70 m
Class 3 – Heavy Industrial	1,000 m	300 m

## GUIDELINE D-6 - INDUSTRIAL CATEGORIZATION CRITERIA

CATEGORY	OUTPUTS	SCALE	PROCESS	OPERATION/ INTENSITY	POSSIBLE EXAMPLES
<b>Class 1</b>	<p>NOISE: Sound not audible off property</p> <p>DUST: Infrequent and not intense</p> <p>ODOUR: Infrequent and not intense</p> <p>VIBRATION: No ground-borne vibration on plant property</p>	<ul style="list-style-type: none"> <li>• No outside storage</li> <li>• Small scale plant of scale is irrelevant in relation to all other criteria for this Class</li> </ul>	<ul style="list-style-type: none"> <li>• Self-contained plant or building which produces/ stores a packaged product</li> <li>• Low probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>• Daytime operations only</li> <li>• Infrequent movement of products and/or heavy trucks</li> </ul>	<ul style="list-style-type: none"> <li>• Electronics manufacturing and repair</li> <li>• Furniture repair and refinishing</li> <li>• Beverage bottling</li> <li>• Auto parts supply</li> <li>• Packaging and crafting services</li> <li>• Distribution of dairy products</li> <li>• Laundry and linen supply</li> </ul>
<b>Class 2</b>	<p>NOISE: Sound occasionally heard off property</p> <p>DUST: Frequent and occasionally intense</p> <p>ODOUR: Frequent and occasionally intense</p> <p>VIBRATION: Possible ground-borne vibration, but cannot be perceived off property</p>	<ul style="list-style-type: none"> <li>• Outside storage permitted</li> <li>• Medium level of production allowed</li> </ul>	<ul style="list-style-type: none"> <li>• Open process</li> <li>• Periodic outputs of minor annoyances</li> <li>• Low probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>• Shift operations permitted</li> <li>• Frequent movements of products and/or heavy trucks with the majority of movement during daytime hours</li> </ul>	<ul style="list-style-type: none"> <li>• Magazine printing</li> <li>• Paint spray booths</li> <li>• Metal command</li> <li>• Electrical production manufacturing</li> <li>• Manufacturing of dairy products</li> <li>• Dry cleaning services</li> <li>• Feed packing plants</li> </ul>
<b>Class 3</b>	<p>NOISE: Sound frequently audible off property</p> <p>DUST: Persistent and/or intense</p> <p>ODOUR: Persistent and/or intense</p> <p>VIBRATION: Ground-borne vibration can frequently be perceived off-property</p>	<ul style="list-style-type: none"> <li>• Outside storage of raw and finished products</li> <li>• Large production levels</li> </ul>	<ul style="list-style-type: none"> <li>• Open process</li> <li>• Frequent outputs of major annoyances</li> <li>• High probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous movement of products and employees</li> <li>• Daily shift operations permitted</li> </ul>	<ul style="list-style-type: none"> <li>• Paint and varnish manufacturing</li> <li>• Organic chemical manufacturing</li> <li>• Breweries</li> <li>• Solvent recovery plants</li> <li>• Soaps and detergent manufacturing</li> <li>• Metal refining and manufacturing</li> </ul>

## APPENDIX D

### RESPONSES TO TOWN OF OAKVILLE COMMENTS

## **RESPONSES TO REVIEW COMMENTS PROVIDED THROUGH THE TOWN OF OAKVILLE**

For consistency and completeness, we have reiterated the comments along with Jade's response. Only responses pertinent to comments on the Preliminary Environmental Noise Report dated June 25, 2021, have been included.

### **Region of Halton, Planning & Public Works Department: Regional Policy – Land Use Compatibility (LUC).**

#### **Comment:**

*“According to the Part IV policies of the ROP (Healthy Communities Policies), the goal for environmental quality is to achieve a high-quality environment for the future generations that will maintain health and improve the quality of living. Section 143(10) of the ROP requires the Region to develop, in consultation with the Local Municipalities, the Province, Federal Government and railway agencies, Land Use Compatibility Guidelines to minimize the adverse effects of noise, vibration, odour, and air pollution from industrial, transportation and utility sources on sensitive land uses, including the application of separation distance between these non-compatible uses.”*

#### **Response:**

The subject lands are designated for employment use under the Town of Oakville Official Plan and zoned E2 (exception #201) in the Town of Oakville Zoning By-law. The proposed development does not contemplate uses which do not comply with the assigned land uses within these documents. That said, the proposed site design provides screening and buffering that meets the general intent of the Guidelines at the SPA review stage. Additionally, should the prescribed separation distances not be sufficiently provided for, the Guidelines require compliance with the applicable sound level limits, which has been demonstrated through the current assessment. The D-6 Guidelines will be specifically addressed in the updated noise report. The noise report has been updated to include an assessment of the Land Use Compatibility.

#### **Comment:**

*“The proposed development is in proximity to residential uses (sensitive land uses). Regional staff acknowledge receipt of the Preliminary Environmental Noise Report (by Jade Acoustics – June 25, 2021). The report primarily focused on analyzing sources of noise, receptors and noise mitigation measures (berms and acoustic fencing) using MECP guidelines for Class 1 Area exclusion limits for stationary and transportation noise sources (i.e. non-refrigerated truck activities, impulses associated with operations, and rooftop mechanical equipment).”*

**Response:**

The noise report has been prepared in accordance with the guidelines of the MOE, generally applicable in the Town of Oakville and Halton Region. The report has been updated to address comments from the Town/Region.

**Comment:**

*“The report also concludes that the Town/Region/MECP sound level limits are predicted to be met at the existing noise sensitive receptors with the incorporation of mitigation measure options (subject to future details about the building plans and tenants of the proposed development, including their mode of operations). Adding that further studies would be required when future details about the development become available.”*

**Response:**

As indicated in the report, the assessment has considered the information that it available at the time of preparation. Any changes to the assumed information should be reviewed to ensure compliance with the applicable sound level limits remains.

**Comment:**

*“In Regional staff opinion, the Site Plan application review stage is a development implementation stage where the finer-details of the built form is finalized. As such, a speculative location of rooftop mechanicals and other development installation will not suffice to assist staff to properly review the proposed development. Also, the proposed development did not account for the MECP’s industrial ‘class’ system (D-6 Guidelines) in its assessment, on the basis of potential area of influence, and minimum separation distance that applies; within the context of noise, vibration, odour, and air pollution effects.”*

**Response:**

The comment related to the speculative location of the rooftop units will be addressed in the updated report, which will consider the actual proposed locations and tonnages of the proposed rooftop units. As information is not yet available regarding the future tenants, it is not possible to assess these sources at this stage in a different manner. The report acknowledges this and recommends that the mitigation measures may need to be reviewed and updated if necessary, once the tenants are known.

In terms of the MOE land use compatibility guidelines (D-6 Guidelines), the subject lands are designated for employment use under the Town of Oakville Official Plan and zoned E2 (exception #201) in the Town of Oakville Zoning By-law. The proposed

development does not contemplate uses which do not comply with the assigned land uses within these documents. That said, the proposed site design provides screening and buffering that meets the general intent of the Guidelines at the SPA review stage. Additionally, prescribed separation distances for a Class II industry have been provided. Further, the Guidelines require compliance with the applicable sound level limits regardless of the separation distance which has been demonstrated through the current assessment. The D-6 Guidelines will be specifically addressed in the updated noise report.