APPENDIX C
Noise Study

NOISE IMPACT ANALYSIS

Star Express Car Wash – Long Beach
1911 East Pacific Coast Highway
Long Beach, California 90806

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1.0 EXECUTIVE SUMMARY

The proposed project, Star Express Car Wash – Long Beach, consists of the removal of existing on-site structures and the construction of a new car wash facility and site improvements including landscaping and site walls. The project site is located at 1911 East Pacific Coast Highway in the City of Long Beach, California.

This report is intended to address permanent noise impacts from project operations on surrounding properties, and temporary construction noise impacts on surrounding properties. Based on the analyses contained herein, we determined that the proposed project would meet the noise requirements of the City of Long Beach and State of California and have a less than significant impact with mitigation incorporated under the California Environmental Quality Act (CEQA).

The California Green Building Standards Code (known as CALGreen) requires that nonresidential occupied structures that are exposed to greater than 65 dBA during any hour of operation must control interior noise levels to be 50 dBA or less. Calculations show that exterior noise levels at occupied buildings associated with this project are not expected to exceed 65 dBA during peak hours. As all exterior noise levels at occupied buildings will be less than 65 dBA during the worst-case hour of operation, the project is expected to comply with CALGreen noise regulations as currently designed.

Noise from the anticipated mechanical equipment on site was analyzed to determine if specific project design features are necessary to reduce the noise impacts to be compliant with applicable regulatory limits. Noise limits specified within the City of Long Beach Municipal Code (LBMC) must be met at neighboring noise-sensitive property lines. Calculations show that, with the current design, taking into account the proposed 6.5-foot masonry wall along the northern property line, noise impacts from the proposed on-site equipment would meet City of Long Beach noise limits at surrounding property lines and are considered less than significant. Accordingly, the following mitigation measure shall be implemented:

> **NOI-1** The 6.5-foot high wall at the north property line must be constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked.

With the inclusion of the proposed 6.5-foot-high masonry wall, the project is expected to meet the above sound requirements as designed. As operational noise impacts do not exceed applicable limits at surrounding property lines, the project would not cause interior noise limits to exceed LBMC limits at off-site residential receiver locations. Project-generated traffic noise is also expected to be less than significant.

The LBMC also contains general requirements for temporary construction noise impacts. The City of Long Beach limits construction activity to 7 a.m. to 7 p.m. on weekdays and federal holidays, and 7 a.m. to 6 p.m. on Saturdays; construction is prohibited on Sundays. During permissible hours of operation, the LBMC does not have a specific noise limit with respect to construction noise. The City of Long Beach Noise Element to the General Plan (LBNEGP) suggests that average construction noise levels at the window of the occupied room closest to the site boundary should not exceed 75 dBA in areas near main roads and heavy industries. The project will meet the 75 dBA threshold at off-site receivers and will comply with the City limitations on construction activity. Although noise impacts are expected to remain in compliance with construction noise limits, the following best practices shall also be employed as a mitigation measure.

NOI-2 The project shall implement the following construction noise control measures at the site to reduce noise impacts at off-site receivers:

1. Turn off equipment when not in use.

2. Limit the use of enunciators or public address systems, except for emergency notifications.

3. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured to prevent rattling and banging.

4. Schedule work to avoid simultaneous construction activities where both are generating high noise levels.

5. Use equipment with effective mufflers.

6. Minimize the use of backup alarms.

Further, at its closest point to the nearest residential receptor, the projected level of vibration from temporary construction activity falls between the “barely perceptible” and “distinctly perceptible” PPV criteria for annoyance, and well below the building damage PPV criteria of 0.5 inches/second. Therefore, temporary construction noise and vibration are expected to be less than significant.

The proposed project is not expected to result in any significant noise impacts by the standards of the CEQA with respect to temporary or permanent noise or vibration, considering the implementation of mitigation measures as detailed herein.

2.0 INTRODUCTION

This acoustical analysis report assesses noise impacts from on-site project-related permanent operational and temporary construction noise sources, and to determine if project design features or mitigation measures are necessary to reduce the noise impacts to be compliant with applicable noise limits. Additionally, interior noise in occupied nonresidential space and construction noise impacts were evaluated. Potential impacts were also assessed for significance per CEQA.

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting, abbreviated "dBA," to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol “L_{EQ}.” Unless a different time period is specified, “L_{EQ}” is implied to mean a period of one hour. Some of the data may also be presented as octave-band-filtered and/or A-octave-band-filtered data, which are a series of sound spectra centered about each stated frequency, with half of the bandwidth above and half of the bandwidth below each stated frequency. This data is typically used for machinery noise analysis and barrier calculations.

Sound pressure is the actual noise experienced by a human or registered by a sound level instrument. When sound pressure is used to describe a noise source, the distance from the noise source must be specified in order to provide complete information. Sound power, on the other hand, is a specialized analytical metric used to provide information without the distance requirement, and may be used to calculate the sound pressure at any desired distance.

2.1 Project Description

The proposed project, Star Express Car Wash – Long Beach, consists of the removal of existing on-site structures (including the existing on-site building, trash enclosure, and fencing) and the construction of a new car wash facility with 18 vacuum stations with 20 individual vacuum hoses. Site improvements including landscaping and site walls are also proposed; a 6.5-foot decorative concrete masonry wall is proposed along the northern property line of the project site. The proposed hours of operation for the car wash facility are 7 a.m. to 8 p.m.

The proposed car wash equipment, pay terminal equipment, vacuum hose, and central vacuum unit noise impacts were evaluated in this analysis. Additionally, project-generated traffic impacts and temporary construction noise were evaluated. For additional project details, please refer to the project plans, provided in Appendix A.

2.2 Project Location

The project site is located at 1911 East Pacific Coast Highway in the City of Long Beach, California. The Assessor's Parcel Number (APN) for the site is 7216-032-021. The project site currently contains a small commercial building, to be removed. For a graphical representation of the site, please refer to the Vicinity Map, Assessor's Parcel Map, Satellite Aerial Photograph, and Topographic Map provided as Figures 1 through 4, respectively.

2.3 Applicable Noise Standards

The State of California requires that commercial developments demonstrate compliance with the requirements of CALGreen (see reference 1). CALGreen states that, if noise level readings of 65 dBA L_{EQ} or greater are documented at the proposed project site, the project must either (a) incorporate wall and roof/ceiling assemblies with a composite STC rating of at least 50 and exterior windows with an STC 40, or (b) provide an acoustical analysis documenting interior noise levels do not exceed 50 dBA in occupied areas during any hour of operation. As detailed in Section 5.1 herein, exterior noise levels at occupied nonresidential facades on the project site are not expected to exceed 65 dBA L_{EQ}.

The noise regulations applicable to project-generated noise sources are contained within the LBMC Chapter 8.80 (see reference 2), which specifies noise limits by land use district. According to the Noise District Map included in the LBMC, the project site and surrounding properties are located within Noise District 1. Please refer to Figure 5 for the Noise District Map.

The LBMC states that Noise District 1 has noise limits of 50 dBA between 7 a.m. and 10 p.m. and 45 dBA between 10 p.m. and 7 a.m.; noise limits are applied at the property line of occupied properties. As the proposed hours of operation are 7 a.m. to 8 p.m., the daytime noise limits were applied.

LBMC Section 8.80.150, Subsection C also states that, if the measured ambient noise level at any properties within Noise Districts 1 through 4 exceeds the noise limits, the allowable noise exposure standard shall be increased in five decibel increments as appropriate to encompass the ambient noise level. As traffic noise is the primary source of ambient noise in the existing environment, an exterior traffic noise analysis was performed to determine ambient noise levels at surrounding property lines, to determine whether it would be appropriate to raise the exterior noise exposure limits. Please refer to Section 3.1.4 for details.

LBMC Section 8.80.170 states that residential land uses have interior noise limits of 45 dBA between 7 a.m. and 10 p.m. and 35 dBA between 10 p.m. and 7 a.m. As the proposed hours of operation are

7 a.m. to 8 p.m., the daytime noise limits were applied. There are no applicable interior noise limits in the LBMC for commercial uses.

The LBMC also contains general requirements for construction noise impacts, limiting construction activity to 7 a.m. to 7 p.m. on weekdays and federal holidays, and 7 a.m. to 6 p.m. on Saturdays; construction is prohibited on Sundays. During permissible hours of operation, the LBMC does not have a specific noise limit with which construction noise must comply. The LBNEGP (see reference 3) suggests that average construction noise levels at the window of the occupied room closest to the site boundary should not exceed 75 dBA in areas near main roads and heavy industries. Considering the site's proximity to Pacific Coast Highway, an average noise level of 75 dBA has been considered an appropriate construction noise threshold for off-site receivers.

Pertinent sections of CALGreen, the LBMC, and the LBNEGP are provided as Appendix B.

3.0 ENVIRONMENTAL SETTING

3.1 Existing Noise Environment

The primary existing noise source in the vicinity of the project site is traffic noise from Pacific Coast Highway and Cherry Avenue. No other noise source is considered significant. The existing noise levels on site can be determined by traffic noise modeling or through a noise measurement; this analysis uses both a traffic noise model and long-term on-site noise monitoring to determine existing ambient noise levels on site.

3.1.1 Modeled Roadway Traffic Noise

The anticipated traffic volumes for Pacific Coast Highway and Cherry Avenue are given based on information from the Caltrans Traffic Census Program and City of Long Beach Public Works Traffic Engineering Division, respectively (see references 4 and 5), which provide existing traffic volumes for roadways within the vicinity of the project site.

Pacific Coast Highway is a six-lane, two-way Regional Corridor running east-west along the south boundary of the project site. No posted speed limit was observed on Pacific Coast Highway; however, based on observations on site, roadway classification, and professional experience, a speed limit of 40 mph was assumed for Pacific Coast Highway. According to Caltrans, Pacific Coast Highway currently carries a traffic volume of approximately 36,500 Average Daily Trips (ADT).

Cherry Avenue is a four-lane, two-way Minor Avenue running north-south to the east of the project site. The posted speed limit is 25 mph. According to City of Long Beach Public Works Traffic Engineering Division 2014 traffic volumes, Cherry Avenue currently carries a traffic volume of approximately 8,700 ADT.

According to Caltrans, Pacific Coast Highway currently carries a truck traffic mix of 1.25% medium trucks and 0.85% heavy trucks. Vehicle mix information was not available for Cherry Avenue; however, based on observations made on site, surrounding land uses, and professional experience, Cherry Avenue is assumed to carry approximately 2.00% medium trucks and 1.00% heavy trucks.

Traffic volumes for the roadway sections near the project site are shown in Table 1. For further information, please refer to Appendix C: Cadna Analysis Data and Results.

Table 1. Overall Roadway Traffic Information					
Roadway Name	Speed Limit (mph)	Vehicle Mix (%)		Traffic Volume (ADT)	
		Medium Trucks	Heavy Trucks	Current (Year)	Future (Year 2040)
Pacific Coast Highway	40	1.25	0.85	36,500 (2016)	46,345
Cherry Avenue	25	2.00	1.00	8,700 (2014)	11,269

3.1.2 Measured Noise Level

An on-site inspection and a traffic noise measurement were made on the afternoon of Wednesday, March 11, 2020. The weather conditions were as follows: sunny skies, moderate humidity, and temperature in the low 70s, with winds at 9 mph. A noise measurement was made along the south boundary of the project site, at approximately 44 feet north of the Pacific Coast Highway centerline and approximately 188 feet west of the Cherry Avenue centerline. The sound level meter was field-calibrated immediately prior to the noise measurement and checked afterwards to ensure accuracy. All sound level measurements conducted and presented in this report, in accordance with the regulations, were made with sound level meters that conform to the American National Standards Institute specifications for sound level meters (ANSI S1.4). All instruments are maintained with National Institute of Standards and Technology traceable calibration, per the manufacturers' standards.

The primary source of noise during the measurement was traffic on Pacific Coast Highway and Cherry Avenue. Peak noise levels measured on site were observed to be from traffic noise sources on Pacific Coast Highway.

The microphone was placed at approximately five feet above the existing grade. Traffic volumes for Pacific Coast Highway were recorded for automobiles, medium-size trucks, and large trucks during the measurement period. After a 10-minute continuous sound level measurement, no changes in the L_{EQ} were observable and results were recorded. The measured noise level and related weather conditions are shown in Table 2, and the noise measurement location is shown in Figure 3.

Table 2. On-Site Noise Measurement Conditions and Results	
Date	Wednesday, March 11, 2020
Time	2:06 p.m. – 2:16 p.m.
Conditions	Sunny skies, wind at 9 mph, temperature in the low 70s with moderate humidity
Measured Noise Level	75.2 dBA L_{EQ}

Additionally, a long-term noise measurement was made beginning the afternoon of Monday, December 21, 2020 and running through the afternoon of Tuesday, December 22, 2020. The purpose of these measurements was to obtain noise information for the site during operating hours, which are expected to be 7 a.m. to 8 p.m. The noise measurement performed is expected to be representative of the typical noise exposure at the site and encompasses the primary source of noise, which is traffic noise. The measurement was performed at approximately six feet above ground level, where the meter was placed in a bush for security purposes. The long-term meter was placed at approximately 155 feet north of the Pacific Coast Highway centerline and approximately 35 feet east of the Gardenia

Avenue centerline. Noise data obtained on site is shown in Table 3, and the measurement location is shown graphically in Figure 3.

Table 3. Long-Term Measured Noise Levels on Site		
Date	**Time**	**Hourly Average Noise Level (dBA L_{EQ})**
December 21, 2020	1 p.m. – 2 p.m.	60.8
	2 p.m. – 3 p.m.	60.3
	3 p.m. – 4 p.m.	61.5
	4 p.m. – 5 p.m.	63.7
	5 p.m. – 6 p.m.	61.5
	6 p.m. – 7 p.m.	64.2
	7 p.m. – 8 p.m.	60.3
	8 p.m. – 9 p.m.	60.0
	9 p.m. – 10 p.m.	60.4
	10 p.m. – 11 p.m.	59.8
	11 p.m. – 12 a.m.	57.2
December 22, 2020	12 a.m. – 1 a.m.	55.4
	1 a.m. – 2 a.m.	53.5
	2 a.m. – 3 a.m.	52.8
	3 a.m. – 4 a.m.	52.1
	4 a.m. – 5 a.m.	54.8
	5 a.m. – 6 a.m.	60.3
	6 a.m. – 7 a.m.	60.9
	7 a.m. – 8 a.m.	62.2
	8 a.m. – 9 a.m.	63.1
	9 a.m. – 10 a.m.	61.3
	10 a.m. – 11 a.m.	71.6
	11 a.m. – 12 p.m.	61.7
	12 p.m. – 1 p.m.	62.2

During the proposed hours of operation of 7 a.m. to 8 p.m. long-term measured noise levels were observed to range from a minimum of 60.3 dBA between the hours of 7 p.m. and 8 p.m. on December 22, 2020 to a maximum of 71.6 dBA between 10 a.m. and 11 a.m. on December 22, 2020. Noise measurement details are provided in Appendix D.

3.1.3 Calculated Noise Level

Consistent with the methodology described in Section 4.1.2, a calculated noise level within the traffic noise model (L_{EQ}) was compared with the measured traffic noise level to determine if adjustments or

corrections (calibration) should be applied to the traffic noise prediction model. Adjustments are intended to account for site-specific differences, such as reflection and absorption, which may be greater or lesser than accounted for in the model.

The measured noise level of 75.2 dBA L_{EQ} at approximately 44 feet north of the Pacific Coast Highway centerline and approximately 188 feet west of the Cherry Avenue centerline was compared to the calculated (modeled) noise level of 73.0 dBA L_{EQ} for the same anticipated traffic flow. According to the Federal Highway Administration's Highway Traffic Noise: Analysis and Abatement Guide (see reference 6), a traffic noise model is considered validated if the measured and calculated noise impacts differ by three decibels or less. No adjustment was deemed necessary to model peak hour noise levels for the proposed building as the difference between the measured and calculated levels was found to be less than three decibels. This information is presented in Table 4. Please refer to Appendix C for more information.

Table 4. Calculated versus Measured Traffic Noise Data

Location	Calculated	Measured	Difference	Correction
44' north of Pacific Coast Highway C.L. and 188' west of Cherry Avenue C.L.	73.0 dBA L_{EQ}	75.2 dBA L_{EQ}	2.2 dB	None Applied

3.1.4 Minimum Daytime Ambient Traffic Noise Levels

The LBMC states that, if the measured ambient noise level at residential or commercial properties exceeds the noise limits, the allowable noise exposure standard shall be increased in five decibel increments as appropriate to encompass the ambient noise level. Due to high exterior noise levels on site, an exterior traffic noise analysis was performed to determine ambient noise levels on site and at surrounding property lines, to determine whether it would be appropriate to raise the exterior noise exposure limits. Ambient noise levels were calculated for surrounding receivers, as it was deemed infeasible to take long-term measurements at off-site locations due to access restrictions. Minimum daytime ambient traffic noise levels were calculated at surrounding properties to determine existing noise levels on site, using the methodology shown in Section 4.1.2. Please refer to Table 5 for calculated ambient noise levels and adjusted noise limits. A graphical representation of receiver locations is shown in Figure 7.

Table 5. Minimum Daytime Ambient Traffic Noise Levels and Adjusted Noise Limits

Receiver	Location	Presumed Noise Limit (dBA)	Calculated Ambient Noise Level (dBA)	Adjusted Daytime Noise Limit (dBA)
R1	North Residential – First Floor	50	57.9	60
R2	North Residential – Second Floor	50	58.5	60
R3	North Residential – First Floor	50	57.5	60
R4	North Residential – Second Floor	50	58.2	60
R5	Northwest Residential – First Floor	50	58.9	60
R6	Northwest Residential – Second Floor	50	59.5	60

Table 5. Minimum Daytime Ambient Traffic Noise Levels and Adjusted Noise Limits				
Receiver	**Location**	**Presumed Noise Limit (dBA)**	**Calculated Ambient Noise Level (dBA)**	**Adjusted Daytime Noise Limit (dBA)**
C7	East Commercial	50	64.2	65
C8	East Commercial	50	69.9	70
C9	South Commercial	50	70.9	75
R10	South Residential – First Floor	50	71.2	75
R11	East Residential – First Floor	50	59.1	60
R12	East Residential – Second Floor	50	60.1	65

As shown above, the calculated adjusted daytime noise limit for residential uses is consistent with the minimum measured ambient noise level of 60.3 dBA during proposed hours of operation. As R10 is located along Pacific Coast Highway, the ambient traffic noise levels are significantly higher than residential receivers that are located further away from Pacific Coast Highway; this higher noise limit is in-line with the higher anticipated noise levels at that receiver. Therefore, these ambient noise calculations are determined to be accurate for use in this analysis.

3.2 Future Noise Environment

The future noise environment in the vicinity of the project site will be primarily a result of the same noise sources, as well as permanent noise from project operations and temporary construction noise.

3.2.1 Future Transportation Noise

The future on-site noise environment is expected to be the result of the same roadway traffic noise sources. Future (year 2040) traffic volumes for Pacific Coast Highway and Cherry Avenue were calculated based on a one-percent growth rate, which is considered to be conservative for this analysis. The traffic volumes of Pacific Coast Highway and Cherry Avenue are expected to increase to 46,345 ADT and 11,269 ADT, respectively.

The same truck percentages from the current traffic volumes were used for future traffic volume modeling. For further roadway details and projected future traffic volumes, please refer to Appendix C.

3.2.2 On-Site Noise Sources

The proposed mechanical equipment on site includes car wash tunnel equipment, pay station equipment, and vacuums. The car wash dryers are expected to be the primary project-related noise source on site. As the central vacuum motor units are expected to be located indoors, they are not expected to generate high levels of noise; however, they were incorporated into the calculations for a worst-case analysis. Additionally, no rooftop HVAC equipment is proposed to be located on site.

The pay station is proposed to be the Xpress Pay Terminal manufactured by DRB systems. By default, the pay station will not produce any sound unless an audio option is selected by the user. Sound levels of this exact equipment are not provided by the manufacturer. To represent the sound

generated when the audio option is selected, the noise levels of a comparable intercom system manufactured by HME are used. The HME intercom system is documented to have a maximum noise level of 84 dBA at one foot from the speaker post. For further details on the HME intercom system, please refer to Appendix E: Manufacturer Data Sheets.

The car wash tunnel is proposed to include fifteen 15HP Tech 21 Dryers, manufactured by MacNeil, which will be located near the exit of the tunnel. Each of the tunnel dryers is proposed to be equipped with PowerLock noise-reducing air valves in the closed position. Additionally, the noise impacts from each individual vacuum station hose were analyzed. Eilar Associates conducted measurements of comparable vacuum hose units at an existing car wash in Vista, California, to obtain accurate information to incorporate into calculations. The central vacuum unit is proposed to be located in the vacuum room. Equipment noise levels for the vacuum unit were provided by Vacutech, the manufacturer, and are expected to generate a noise level of 68 dBA at a distance of three feet from the vacuum enclosure.

To the extent possible, noise levels of proposed car wash equipment were provided by the applicable manufacturer. The noise levels of individual vacuum station hoses were measured directly by Eilar Associates at a comparable site in Vista, California, and are shown in Table 6. Supporting manufacturer information is provided in Appendix E. As the noise levels for the car wash dryers and central vacuum unit were provided in broadband sound pressure levels at a specified distance, sound pressure levels were converted to sound power levels using the reference distance given, and standard frequency spectra of typical equipment were applied.

Table 6. Sound Power Level of Proposed Mechanical Equipment

Equipment	Sound Power Level at Octave Band Frequency (dB)									Sound Power Total (dBA)
	31.5	63	125	250	500	1K	2K	4K	8K	
15HP Tech 21 Dryer	--	91	95	92	92	93	91	89	96	98
Single Vacuum Station[1]	70	70	66	64	66	71	75	77	80	83
Central Vacuum Unit	67	73	71	69	68	68	65	62	55	72

[1]Estimated noise level of single hose vacuum station, based on measurement of double hose vacuum station in place at an existing car wash facility, located in Vista, California.

Operational mechanical noise levels were calculated for the project site using the above information. Results of this analysis are provided in Section 5.3.1.

4.0 METHODOLOGY AND EQUIPMENT

4.1 Methodology

4.1.1 Field Measurement

Typically, a “one-hour” equivalent sound level measurement (L_{EQ}, A-Weighted) is recorded for at least one noise-sensitive location on the site to determine existing on-site noise levels. During the on-site noise measurement, start and end times are recorded, and vehicle counts are made for cars, medium trucks (double-tires/two axles), and heavy trucks (three or more axles) for the corresponding road

segment(s). Supplemental sound measurements of one hour or less in duration are often made to further describe the noise environment of the site.

For measurements of less than one hour in duration, the measurement time is long enough for a representative traffic volume to occur and the noise level (L_{EQ}) to stabilize. The vehicle counts are then converted to one-hour equivalent volumes by applying an appropriate factor. Other field data gathered include measuring or estimating distances, angles-of-view, slopes, elevations, roadway grades, and vehicle speeds. This information is subsequently verified using available maps and records.

4.1.2 Roadway Noise Calculation

The Traffic Noise Model (TNM) (see reference 7) calculation protocol in Cadna Version 2021 (based on the methodology used in TNM Version 2.5, released in February 2004 by the U.S. Department of Transportation) (see reference 8) was used to determine the minimum ambient noise level (dBA L_{EQ}) during hours of operation (dBA L_{EQ}). In order to determine this value, the ADT value is divided into percentages for each hour of the day to establish maximum noise impacts that the project site may experience during a 24-hour period. These percentages were established in a study performed by Katz-Okitsu and Associates, Traffic Engineers (see reference 9). According to this study, the minimum traffic volume expected during proposed operational hours is approximately 4.2% of the ADT value (between the hours of 7 p.m. and 8 p.m.); the minimum volume percentage of traffic volumes was used to determine the minimum ambient noise levels, to provide the worst-case noise limits, per the LBMC. According to this study, the maximum traffic volume expected during proposed operational hours is approximately 8.6% of the ADT value (between the hours of 4 p.m. and 5 p.m.); the maximum volumes were used to determine maximum anticipated traffic noise impacts to building facades.

In order to determine the estimated traffic volumes of roadways during the traffic noise measurement made on site for model calibration, the approximate percentage of the ADT value for the time period in which the measurement is made is incorporated into the traffic model. These percentages have been established in a study performed by Katz-Okitsu and Associates, Traffic Engineers (see reference 9). For purposes of calibrating the TNM, 7.4% of the ADT values for the current environment were used in calculations (for roadways that were not manually counted) to account for traffic between the hours of 2 p.m. and 3 p.m. in the vicinity of the project site.

4.1.3 Cadna Noise Modeling Software

Modeling of the outdoor noise environment is accomplished using Cadna Version 2021 (see reference 8), which is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. Cadna (Computer Aided Noise Abatement) assists in the calculation, presentation, assessment, and alleviation of noise exposure. It allows for the input of project information such as noise source data, barriers, structures, and topography to create a detailed model and uses the most up-to-date calculation standards to predict outdoor noise impacts. Noise standards used by Cadna that are particularly relevant to this analysis include ISO 9613 (Attenuation of sound during propagation outdoors). Cadna provides results that are in line with basic acoustical calculations for distance attenuation and barrier insertion loss.

4.1.4 Decibel Addition

To determine the combined logarithmic noise level of two known noise source levels, the values are converted to the base values, added together, and then converted back to the final logarithmic value, using the following formula:

$$L_C = 10\log(10^{L1/10} + 10^{L2/10} + 10^{LN/10})$$

where L_C = the combined noise level (dB), and
L_N = the individual noise sources (dB).

4.1.5 Project-Generated Traffic

Project-generated traffic for this project was analyzed by LSA in a draft trip generation analysis dated January 11, 2021 and updated in December 2021 (see reference 10). According to this analysis, the project is expected to generate approximately 775 Average Daily Trips. Please note that this does not take into account any existing trips on-site and is, therefore, a conservative analysis and likely overstates the traffic noise levels of the project. This traffic information was incorporated into the analysis to determine worst-case noise exposure at surrounding receivers. Please refer to Section 5.3.2 for the results of this analysis.

Changes in traffic noise levels can be predicted by inputting the ratio of the two scenarios into the following logarithmic equation:

$$\Delta = 10\log(V2/V1)$$

where: Δ= Change in sound energy,
V1 = original or existing traffic volume, and
V2 = future or cumulative traffic volume.

4.1.6 Temporary Construction Equipment

On-site construction activities are expected to consist of the following stages: demolition/excavation/grading, slab work/utilities, building construction, and paving/building finishes. Please refer to Table 7 for anticipated on-site construction equipment during each stage of activity with noise levels and duty cycles for each piece of equipment. Construction equipment noise levels were provided by the UK Department for Environment, Food and Rural Affairs (DEFRA), and duty cycle information was taken from the Federal Highway Administration (FHWA) (see references 11 and 12).

Table 7. Anticipated Construction Activity and Equipment Noise Levels			
Equipment	**Duty Cycle (%)[1]**	**Noise Level at 50 feet (dBA)[2]**	**Activity Stage(s)**
Backhoe Loader	40	64	Demolition/Excavation/Grading
Dump Truck	40	78	Demolition/Excavation/Grading
Excavator	40	66	Demolition/Excavation/Grading, Slab Work/Utilities
Paver	50	73	Paving/Building Finishes
Roller (Non-Vibratory)	20	76	Paving/Building Finishes
Scissor Lift	40	67	Demolition/Excavation/Grading, Slab Work/Utilities, Building Construction, Paving/Building Finishes
Trailer Crane	16	67	Building Construction

[1]Duty cycle information was provided by the Federal Highway Administration.
[2]Noise level information was provided by UK Department for Environment, Food and Rural Affairs.

4.2 Measurement Equipment

Some or all of the following equipment was used at the site to measure existing ambient noise levels:

- Larson Davis Model LxT Type 1 Integrating Sound Level Meter, Serial # 4084
- Soft dB Model Piccolo II Type 2 Sound Level Meter, Serial # P0220043006
- Larson Davis Model CAL200 Type 1 Calibrator, Serial # 16455
- Microphone with windscreen, tripod

The sound level meter was field-calibrated immediately prior to the noise measurement and checked afterwards to ensure accuracy. All sound level measurements conducted and presented in this report, in accordance with the regulations, were made with sound level meters that conform to the American National Standards Institute specifications for sound level meters (ANSI S1.4). All instruments are maintained with National Institute of Standards and Technology traceable calibration, per the manufacturers' standards.

5.0 NOISE IMPACTS

5.1 Exterior

Peak hour traffic noise impacts were calculated at the building facades for use in interior noise calculations using traffic information shown in Section 3.2.1. Future peak hour noise impacts at these locations are shown in Table 8. More information is provided in Appendix C, and receiver locations are shown in Figure 6.

Table 8. Peak Hour Traffic Noise Levels at Building Facades			
Building	**Receiver**	**Facade Location**	**Peak Hour Noise Level (dBA L_{EQ})**
Monitoring Room	F1	North	52.8
	F2	West	59.4
	F3	South	59.8
	F4	East	56.9

5.2 Interior

CALGreen requires that nonresidential structures that are exposed to greater than 65 dBA during any hour of operation must control interior noise levels to be 50 dBA or less. Contemporary exterior building construction is expected to achieve at least 15 decibels of exterior-to-interior noise attenuation with windows opened, according to the U.S. EPA (see reference 13). As a result, exterior noise levels of more than 65 dBA may potentially result in interior conditions that fail to meet the 50 dBA requirements for nonresidential space.

As shown in Table 8, noise impacts at occupied building facades associated with the project are not anticipated to exceed 65 dBA. As all exterior noise levels at occupied buildings will be less than 65 dBA during the worst-case hour of operation (highest traffic noise levels), all occupied nonresidential space on site is expected to comply with CALGreen interior noise requirements with typical building construction, and therefore, no detailed interior noise analysis would be required for this project. No special design features, such as STC-rated glazing, are required for meeting interior noise limits.

5.3 Permanent Project-Related Noise Impacts

5.3.1 On-Site Noise Sources

Noise levels of the proposed on-site mechanical equipment were calculated using Cadna at surrounding properties. These receivers represent the nearest affected noise-sensitive locations, and therefore, any other potential receivers would be exposed to lower noise levels as they will receive additional attenuation due to distance and shielding from intervening structures. Equipment noise levels were calculated considering shielding provided by the proposed buildings on site. Additionally, calculations consider the proposed 6.5-foot-high property line wall along the northern property line. Ground level receivers (R1, R3, R5, C7, C8, C9, R10, and R11) were calculated at a height of five feet above grade. To estimate the noise levels at second-floor facades of residential buildings to the north, east, and northwest, receivers R2, R4, R6, and R12 were calculated at a height of 15 feet above grade. Please refer to Figure 7 for a graphical representation of evaluated receiver locations.

In addition, appropriate duty cycles were applied to the equipment operating on site. The intercom equipment was analyzed as being used for 30 minutes out of each hour. That assumption is expected to be a conservative estimate. The intercom feature is expected to operate only occasionally and for very brief intervals to address customer questions. By default the pay station operation will be silent unless and only to the extent an audio option is selected by the user. In order to illustrate the maximum impact scenario, the car wash dryers, vacuum hoses, and central vacuum unit are assumed to be in operation constantly, they were evaluated as being operational during the entire hour.

It should be noted that, based on professional experience, noise impacts from idling vehicles on site are expected to be more than 10 dBA below impacts from on-site mechanical equipment. For this reason, noise impacts from idling vehicles would not be expected to increase the overall projected operational noise impacts as evaluated herein, and this noise source is considered to be insignificant, compared to other, more prominent noise sources.

Results of the analysis are shown in Table 9 below. Receiver locations and equipment noise contours are shown in Figure 7. Additional information is shown in Appendix C.

Table 9. Calculated Noise Levels for Proposed Equipment – Current Design

Receiver	Receiver Location	Exterior Noise Limit (dBA)	Calculated Equipment Noise Level (dBA)
R1	North Residential – First Floor	60	57.0
R2	North Residential – Second Floor	60	56.2
R3	North Residential – First Floor	60	51.3
R4	North Residential – Second Floor	60	57.7
R5	Northwest Residential – First Floor	60	54.7
R6	Northwest Residential – Second Floor	60	52.9
C7	East Commercial	65	52.2
C8	East Commercial	70	51.5
C9	South Commercial	75	65.7
R10	South Residential – First Floor	75	51.4
R11	East Residential – First Floor	60	51.5
R12	East Residential – Second Floor	65	50.9

As shown above, with the proposed 6.5-foot-high property line wall along the northern property line, calculated noise levels are expected to meet the City of Long Beach requirements as designed. Accordingly, the following mitigation measure shall be implemented:

NOI-1 The 6.5-foot high wall at the north property line must be constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked.

Additionally, any windows proposed in the wall of the car wash tunnel should be appropriately sealed with acoustical sealant.

As shown above, with the proposed 6.5-foot-high property line wall along the northern property line, constructed with the dimensions proposed, proposed mechanical noise levels are expected to comply with the strictest applicable noise limits at all nearby property lines. The projected noise levels fall below the applicable exterior noise limit at all receiver locations. Any other noise-sensitive receivers are located at a greater distance from proposed equipment and will be exposed to lesser noise levels due to distance attenuation and shielding provided by intervening structures.

In addition, exterior noise impacts at off-site residential receivers were reviewed for compliance with the applicable interior noise limits articulated at LBMC Section 8.80.170. Contemporary exterior building construction is expected to achieve at least 15 decibels of exterior-to-interior noise attenuation with windows opened, according to the U.S. EPA (see reference 13), such that exterior noise impacts of 60 dBA of less would result in noise impacts that comply with the 45 dBA interior daytime noise limit. As operational noise impacts do not exceed 60 dBA at residential receivers, the project would not cause interior noise limits to be exceeded at off-site residential receiver locations.

5.3.2 Project-Generated Traffic Noise

As detailed in Section 4.1.5, project-generated traffic impacts were evaluated to determine whether noise impacts from the project site would be significant. Calculations were performed to determine the approximate change in noise exposure at surrounding receivers due to project-generated traffic. A significant direct impact occurs when project traffic combines with existing traffic and causes a doubling of sound energy, which is an increase of 3 dB. Direct impacts are assessed by comparing existing traffic volumes to existing plus project traffic volumes using the calculation methodology shown in Section 4.1.5. Project-generated traffic noise increases are shown in Table 10.

Table 10. Anticipated Traffic Noise Increases with Project-Generated Traffic

Roadway	Traffic Volume (ADT)		Noise Level Increase (dBA)
	Existing	Project-Generated	
Pacific Coast Highway	36,500	775	0.1
Cherry Avenue	8,700	775	0.4

As shown in Table 10, the noise level increase from project-generated traffic is expected to be less than 3 dB at all roadways. For this reason, project-generated traffic noise levels are expected to be less than significant.

5.4 Temporary Construction Noise Impacts

The City of Long Beach limits construction activity to 7 a.m. to 7 p.m. on weekdays and federal holidays, and 7 a.m. to 6 p.m. on Saturdays; construction is prohibited on Sundays. During permissible construction hours, the LBMC does not have a specific noise limit with which construction noise must comply. However, the LBNEGP gives a construction noise limit of 75 dBA L_{EQ}.

On-site construction activities are expected to consist of the following stages: demolition/excavation/grading, slab work/utilities, building construction, and paving/building finishes. Please refer to Table 7 for anticipated on-site construction equipment during each stage of activity, construction equipment noise levels and duty cycles for each piece of equipment. Construction noise levels were calculated at surrounding receivers to the north, south (across Pacific Coast Highway), east, and west (across Gardenia Avenue). Any other potentially noise-sensitive receivers are located at a greater distance from construction activity, and therefore would be exposed to lesser noise impacts due to distance attenuation and shielding provided by intervening structures.

Construction noise sources were placed near the center of the work area to evaluate typical impacts to the surrounding receivers as equipment moves around the property. Noise calculations consider typical duty cycles of equipment, to account for periods of activity and inactivity on the site.

Noise levels for each stage of construction are shown in Table 11. Detailed calculations are provided in Appendix C, and a graphical representation of construction noise source and receiver locations is provided as Figure 8.

Table 11. Temporary Construction Noise Levels at Surrounding Property Lines			
Activity Stage	**Equipment**	**Receiver**	**Construction Noise Level (dBA L_{EQ})**
Demolition/ Excavation/ Grading	Backhoe Loader, Dump Truck, Excavator, Scissor Lift	R1 (West)	67.7
		R2 (North)	70.0
		R3 (East)	71.7
		R4 (South)	63.9
Slab Work/ Utilities	Excavator, Scissor Lift	R1 (West)	59.0
		R2 (North)	61.3
		R3 (East)	63.0
		R4 (South)	55.2
Building Construction	Scissor Lift, Trailer Crane	R1 (West)	57.8
		R2 (North)	60.1
		R3 (East)	61.9
		R4 (South)	54.1
Paving/Building Finishes	Paver, Roller (Non-Vibratory), Scissor Lift	R1 (West)	67.7
		R2 (North)	70.0
		R3 (East)	71.7
		R4 (South)	63.9

As shown above, construction noise levels are not expected to exceed the threshold of 75 dBA. Any other surrounding noise-sensitive receivers in the vicinity of the project are located at a greater distance from proposed construction activity, and therefore will be exposed to lesser noise impacts due to additional distance attenuation and shielding provided by intervening structures.

With operating hours limited to those permitted by the City of Long Beach, temporary construction noise impacts are expected to be less than significant at surrounding properties.

Although noise impacts are expected to remain in compliance with construction noise limits, the following best practices shall also be employed as a mitigation measure:

NOI-2 The project shall implement the following construction noise control measures at the site to reduce noise impacts at off-site receivers:

1. Turn off equipment when not in use.

2. Limit the use of enunciators or public address systems, except for emergency notifications.

3. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured to prevent rattling and banging.

4. Schedule work to avoid simultaneous construction activities where both are generating high noise levels.

5. Use equipment with effective mufflers.

6. Minimize the use of backup alarms.

With adherence to the best practice construction noise control techniques in NOI-2, temporary construction noise impacts are expected to be further reduced below the less than significant levels measured at surrounding properties as set forth in Table 11.

5.5 CEQA Significance Determination

Noise impacts from the project site are summarized below and classified per Section XIII. NOISE of the CEQA Environmental Checklist Form (see reference 14). This list summarizes conclusions made within the report and classifies the level of significance as: Potentially Significant Impact, Less than Significant with Mitigation Incorporated, Less than Significant Impact, or No Impact. *Italics* are used to denote language from the CEQA Environmental Checklist Form.

XII. NOISE — Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact with Mitigation Incorporated. Operational noise impacts calculated in Section 5.3 are not expected to generate a substantial permanent increase in ambient noise levels in the vicinity of the project site with the implementation of mitigation measure NOI-1. A substantial increase would be considered an increase of three decibels (3 dB) or more, which would represent a doubling of sound energy.

As reflected in Table 9 above, with the proposed 6.5-foot-high property line wall along the northern property line, the projected noise levels associated with project operation are expected to comply with the strictest applicable noise limits at all nearby property lines. Accordingly, the following mitigation measure shall be implemented:

NOI-1 The 6.5-foot high wall at the north property line must be constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked.

With the inclusion of the proposed 6.5-foot-high masonry wall, the project is expected to meet the above sound requirements as designed. The projected noise levels fall below the applicable noise limit at all receiver locations shown in Table 9, and any other noise-sensitive receivers are located at

a greater distance from proposed equipment and will be exposed to lesser noise levels due to distance attenuation and shielding provided by intervening structures.

Minimum ambient noise levels were calculated at sensitive receiver locations as detailed in Section 3.1.4 and were combined with the projected equipment noise impacts with mitigation in place in terms of dBA to determine the cumulative noise impact and the increase in ambient noise levels resulting from operation of the project. Results are shown in Table 12.

Table 12. Calculated Cumulative Noise Impacts at Surrounding Property Lines

Receiver	Location	Noise Level (dBA)				Impact
		Ambient	Project-Generated	Cumulative	Ambient Increase	
R1	North Residential – First Floor	57.9	57.0	60.5	2.6	Less than Significant
R2	North Residential – Second Floor	58.5	56.2	60.5	2.0	Less than Significant
R3	North Residential – First Floor	57.5	51.3	58.4	0.9	Less than Significant
R4	North Residential – Second Floor	58.2	57.7	61.0	2.8	Less than Significant
R5	Northwest Residential – First Floor	58.9	54.7	60.3	1.4	Less than Significant
R6	Northwest Residential – Second Floor	59.5	52.9	60.4	0.9	Less than Significant
C7	East Commercial	64.2	52.2	64.5	0.3	Less than Significant
C8	East Commercial	69.9	51.5	70.0	0.1	Less than Significant
C9	South Commercial	70.9	65.7	72.0	1.1	Less than Significant
R10	South Residential – First Floor	71.2	51.4	71.2	0.0	Less than Significant
R11	East Residential – First Floor	59.1	51.5	59.8	0.7	Less than Significant
R12	East Residential – Second Floor	60.1	50.9	60.6	0.5	Less than Significant

The results in Table 12 demonstrate that the increase in ambient noise levels from on-site operation, using conservative operating assumptions for all on site machinery, and incorporating existing and projected ambient noise levels, will result in a less than 3 dBA increase as measured at each of the surrounding property lines. Any other noise-sensitive receivers are located at a greater distance from proposed equipment and will be exposed to lesser noise levels due to distance attenuation and shielding provided by intervening structures. Additionally, as demonstrated in Section 5.3.2 of this report, noise impacts from project-generated traffic are not expected to cause a significant direct increase on any surrounding roadway. Impacts from project operations are considered to be less than significant with mitigation incorporated.

As shown in Section 5.4 of this report, construction noise impacts are expected to be less than significant considering the best practices outlined in NOI-2 employed as a mitigation measure, which are as follows:

NOI-2 The project shall implement the following construction noise control measures at the site to reduce noise impacts at off-site receivers:

1. Turn off equipment when not in use.

2. Limit the use of enunciators or public address systems, except for emergency notifications.

3. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured to prevent rattling and banging.

4. Schedule work to avoid simultaneous construction activities where both are generating high noise levels.

5. Use equipment with effective mufflers.

6. Minimize the use of backup alarms.

As demonstrated above, the project is not expected to cause a substantial permanent or temporary increase in ambient noise levels with mitigation in place, and therefore, this impact can be classified as less than significant with mitigation incorporated.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. The demolition/excavation/grading stage of construction has the potential to generate the highest vibration levels of any phase of construction, as excavation and grading activities would take place closest to sensitive receivers and may consist of the use of a small excavator. According to the Federal Transit Administration (FTA) Transit Noise and Vibration Assessment Manual (see reference 15), a small bulldozer generates a peak particle velocity (PPV) of approximately 0.003 inches/second at a distance of 25 feet from equipment; as the FTA Manual does not give levels for a small excavator, a small bulldozer was used as it is considered to be comparable to a small excavator. The evaluation of an impact's significance can be determined by reviewing both the likelihood of annoyance to individuals as well as the potential for damage to existing structures. According to the Caltrans Transportation and Construction Vibration Guidance Manual (see reference 16), the appropriate threshold for damage to modern residential structures is a PPV of 0.5 inches/second. Annoyance is assessed based on levels of perception, with a PPV of 0.01 being considered "barely perceptible," 0.04 inches/second as "distinctly perceptible," 0.1 inches/second as "strongly perceptible," and 0.4 inches/second as "severe."

It is estimated that the excavator will be closest to the nearest sensitive residential receptors when it is five feet from the residential structure, near the north boundary of the site. At this distance, the PPV would be approximately 0.034 inches/second at the residential receiver. This level of vibration falls well below the building damage PPV criteria of 0.5 inches/second. The impact falls between the "barely perceptible" and "distinctly perceptible" PPV criteria for annoyance. Once the equipment is twelve feet from the nearest receiver, the impact will fall below the "barely perceptible" PPV criteria for annoyance. As construction vibration will occur for only a short period of time when work is performed near the eastern boundary of the property, and during such limited period, the work is not anticipated to cause damage to off-site buildings, and will only approach the threshold of "distinctly

perceptible" vibration, it is the opinion of the undersigned that temporary construction vibration impacts would not be "excessive" and therefore are less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less Than Significant Impact. The project site is located slightly less than two miles southwest of the Long Beach International Airport. Though the project site is located within two miles of the airport, the project is not located within the noise contours (see reference 17); therefore, the proposed project would not expose people working in the project area to excessive noise levels from such uses.

6.0 CONCLUSION

CALGreen requires that nonresidential occupied structures that are exposed to greater than 65 dBA during any hour of operation must control interior noise levels to be 50 dBA or less. Calculations show that exterior noise levels at occupied buildings on the project site are not expected to exceed 65 dBA during peak hour. As all exterior noise levels at occupied buildings will be less than 65 dBA during the worst-case hour of operation, the project is expected to comply with CALGreen noise regulations as currently designed.

Noise from the anticipated mechanical equipment on site was calculated to determine if specific project design features are necessary to reduce the noise impacts to be compliant with applicable limits. Noise limits specified within the LBMC must be met at neighboring noise-sensitive property lines. As detailed in Section 3.1.4, ambient noise levels were measured and calculated in order to determine noise limits at surrounding properties. Calculations show that, with the current design considering the proposed 6.5-foot masonry wall along the northern property line, and incorporating existing and projected ambient noise levels, noise impacts from the proposed on-site equipment are expected to meet City of Long Beach noise limits at surrounding property lines. Accordingly, the following mitigation measure shall be implemented:

NOI-1 The 6.5-foot high wall at the north property line must be constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked.

The proposed 6.5-foot-high masonry wall is expected to meet the above sound requirements as designed. As operational noise impacts do not exceed applicable limits at surrounding property lines, the project would not cause interior noise limits to exceed LBMC limits at off-site residential receiver locations. Additionally, as detailed in Table 12, the increase in ambient noise levels from on-site operation, using conservative operating assumptions for all on site machinery, and incorporating existing and projected ambient noise levels, will result in a less than 3 dBA increase as measured at each of the surrounding property lines; a noise level increase of less than 3 dBA is considered to be less than significant. Project-generated traffic noise is also expected to be less than significant. Therefore, noise impacts from project operations are expected to fall within applicable noise limits and can be considered less than significant with the incorporation of mitigation measure NOI-1.

The LBMC limits construction activity to 7 a.m. to 7 p.m. on weekdays and federal holidays, and 7 a.m. to 6 p.m. on Saturdays; construction is prohibited on Sundays. During permissible hours of operation, the City does not have a specific noise limit with respect to construction noise. The project

will comply with the City limitations on construction activity. As shown in Section 5.4 of this report, construction noise impacts are expected to be less than significant with the implementation of the following best practice measures as mitigation:

NOI-2 The project shall implement the following construction noise control measures at the site to reduce noise impacts at off-site receivers:

1. Turn off equipment when not in use.

2. Limit the use of enunciators or public address systems, except for emergency notifications.

3. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured to prevent rattling and banging.

4. Schedule work to avoid simultaneous construction activities where both are generating high noise levels.

5. Use equipment with effective mufflers.

6. Minimize the use of backup alarms.

Further, at its closest point to the nearest residential receptor, the projected level of vibration from temporary construction activity falls between the “barely perceptible” and “distinctly perceptible” PPV criteria for annoyance, and well below the building damage PPV criteria of 0.5 inches/second. With construction hours being limited to those allowable in the City of Long Beach and the incorporation of mitigation as described above, temporary construction noise and vibration are expected to be less than significant.

The proposed project is not expected to result in any potentially significant noise impacts by the standards of CEQA with respect to temporary or permanent noise or vibration, considering the implementation of mitigation measures as detailed herein.

7.0 CERTIFICATION

This analysis is based upon a current worst-case scenario of anticipated equipment noise levels. Substitution of equipment with higher noise emission levels may invalidate the recommendations of this study. These conclusions and recommendations are based on the best and most current project-related information available at the time this study was prepared.

This report is based on the related project information received and measured noise levels, and represents a true and factual analysis of the acoustical impact issues associated with the Star Express Car Wash – Long Beach project, located at 1911 East Pacific Coast Highway in the City of Long Beach, California. This report was prepared by Mo Ouwenga and Amy Hool.

8.0 REFERENCES

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3. City of Long Beach Noise Element to the General Plan, Adopted March 25, 1975.

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5. City of Long Beach Public Works, Engineering Bureau, Traffic Engineering Division, 2014 Citywide Traffic Flow.

6. Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guide, December 2011.

7. Federal Highway Administration, Traffic Noise Model Version 2.5.

8. DataKustik, CadnaA (Computer Aided Noise Abatement), Version 2021.

9. Traffic Distribution Study, by Katz-Okitsu and Associates Traffic Engineers, 1986.

10. LSA, Trip Generation Analysis for the Proposed Car Wash Project at 1911 E. Pacific Coast Highway, Long Beach, California, 20 December 2021

11. Department for Environment Food and Rural Affairs (DEFRA), Update of Noise Database for Prediction of Noise on Construction and Open Sites, 2005.

12. U.S. Department of Transportation Federal Highway Administration, Construction Noise Handbook, Construction Equipment Noise Levels and Ranges.

13. U.S. Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare With an Adequate Margin of Safety, March 1974.

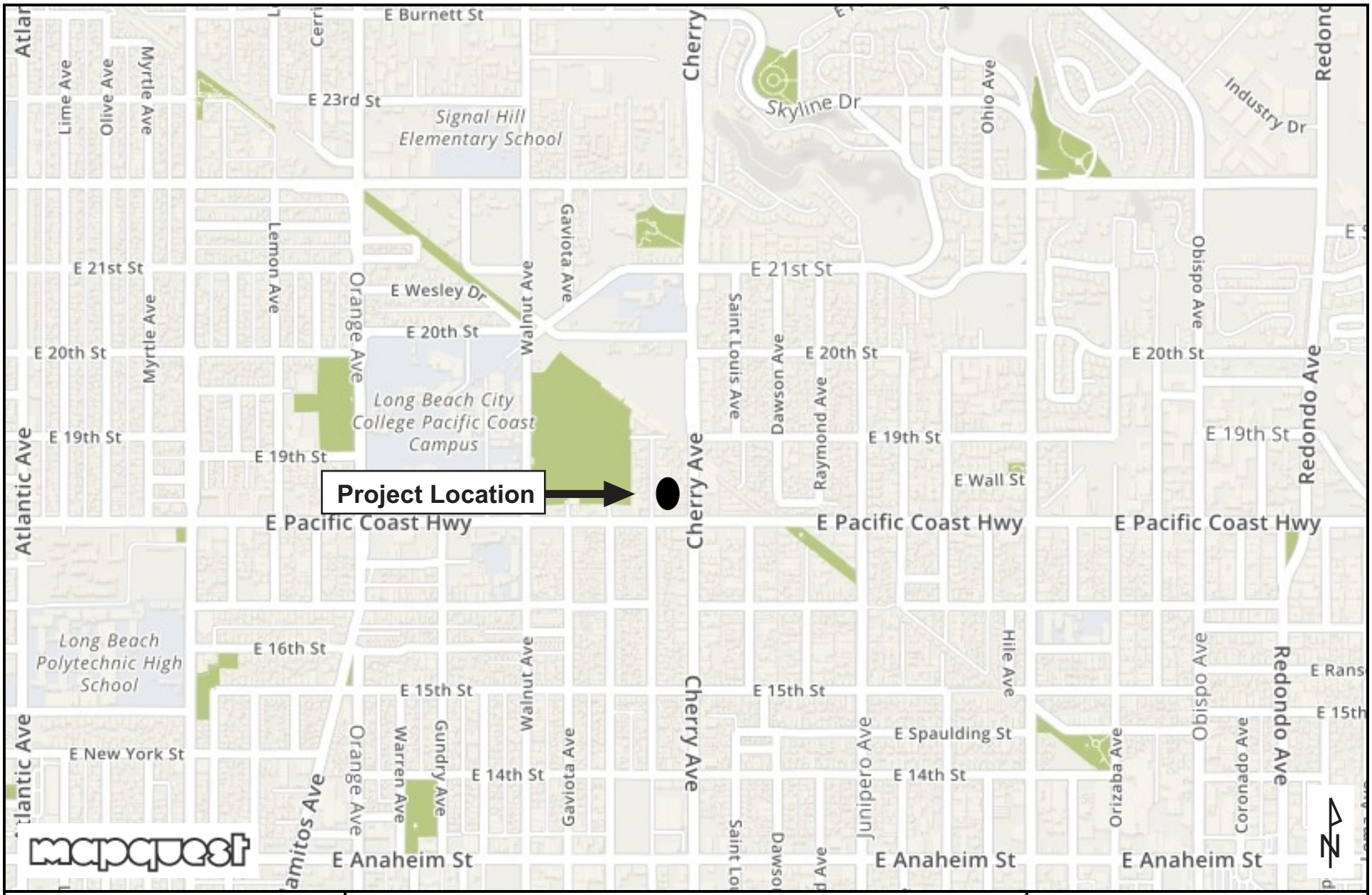
14. California Environmental Quality Act (CEQA), Statute and Guidelines, 2019.

15. Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018.

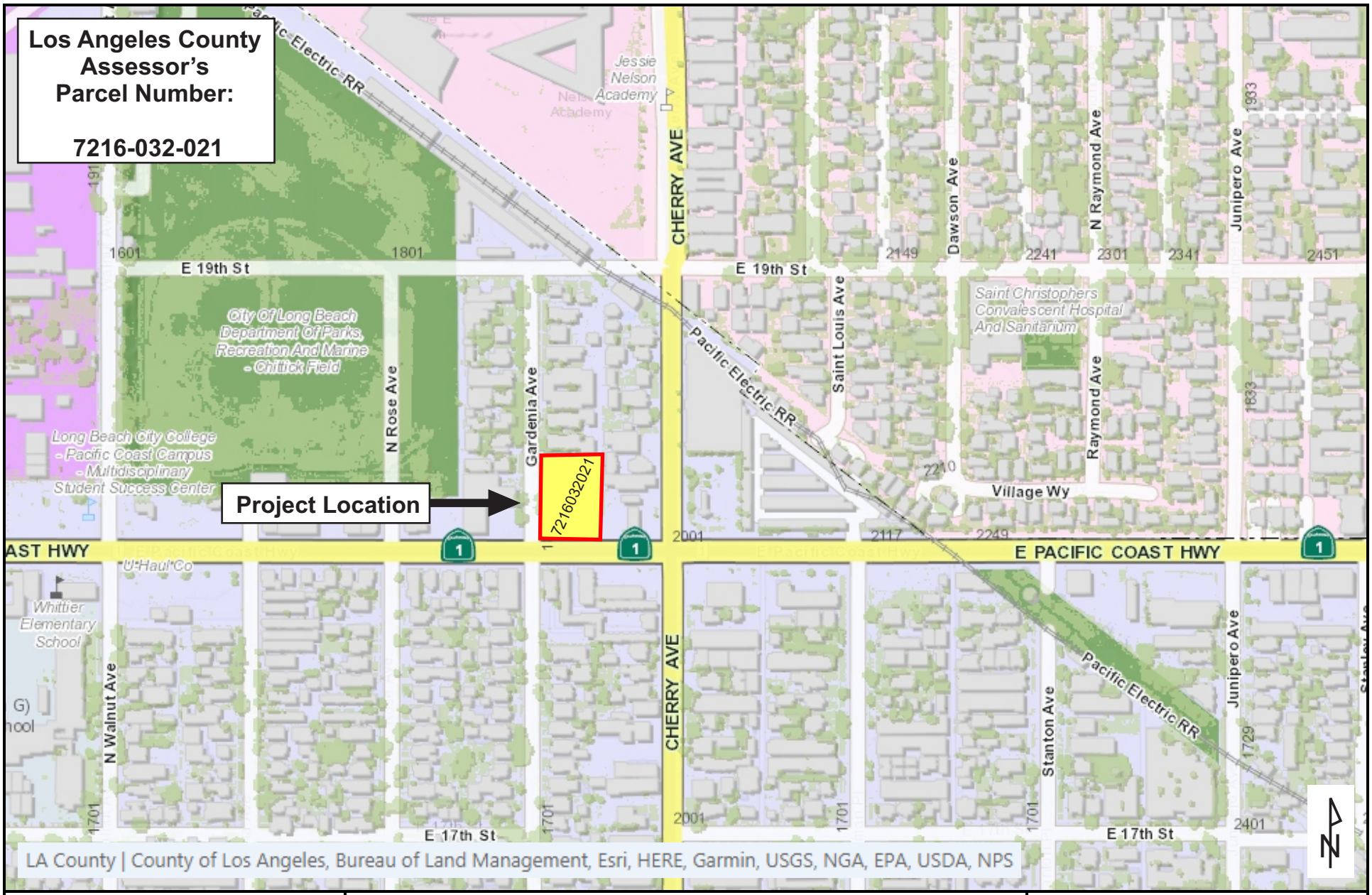
16. California Department of Transportation (Caltrans), Transportation and Construction Vibration Guidance Manual, September 2013.

17. Long Beach Airport Terminal Area Improvement Project, Year 2004 CNEL Contours with 11 Additional Air Carrier and 25 Additional Commuter Flights, 2005.

FIGURES



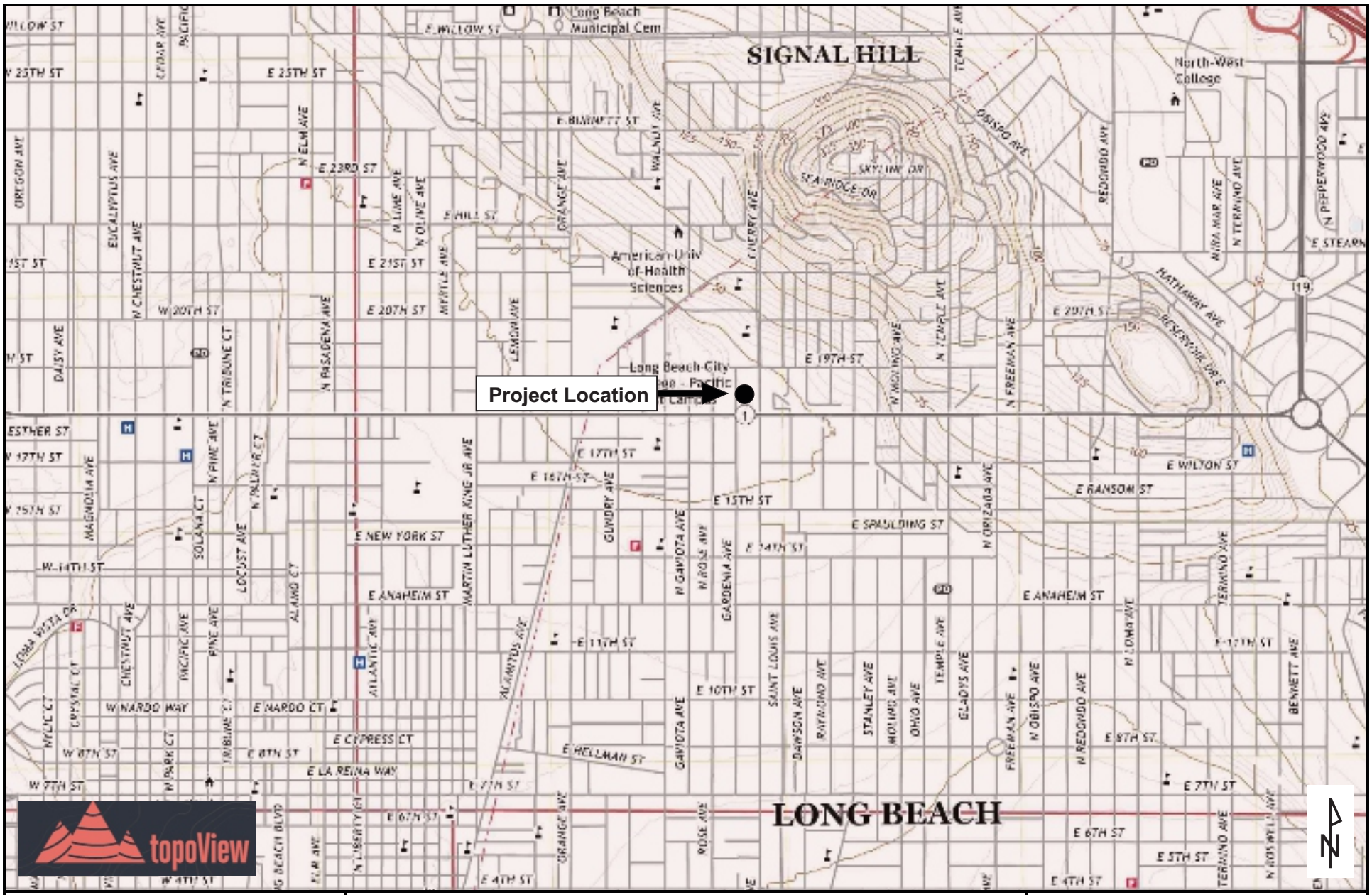
Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Vicinity Map** **Job # L200301.3**	**Figure 1**



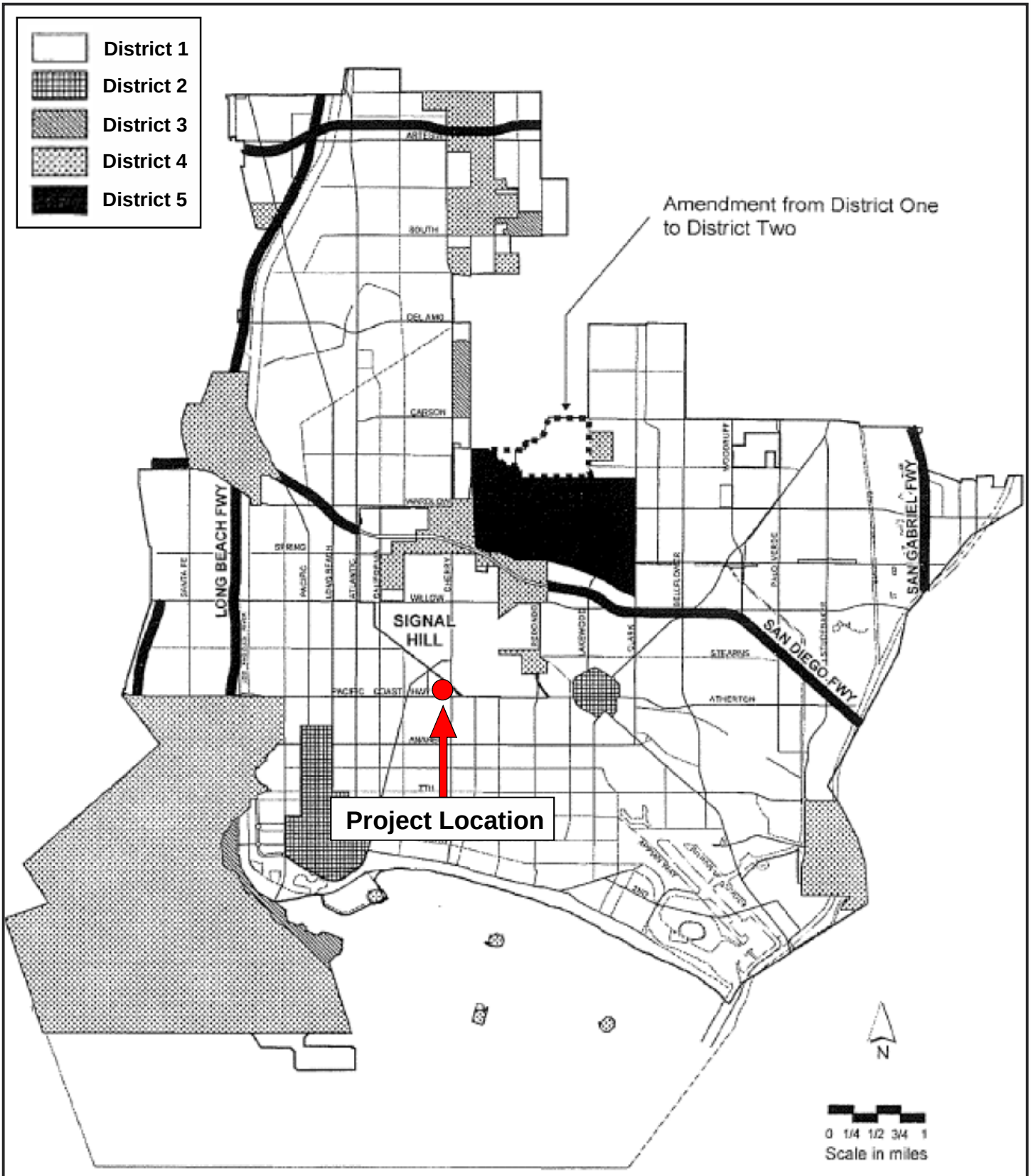
Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Assessor's Parcel Map** **Job # L200301.3**	**Figure 2**



Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Satellite Aerial Photograph** **Showing Noise Measurement Locations** **Job # L200301.3**	**Figure 3**



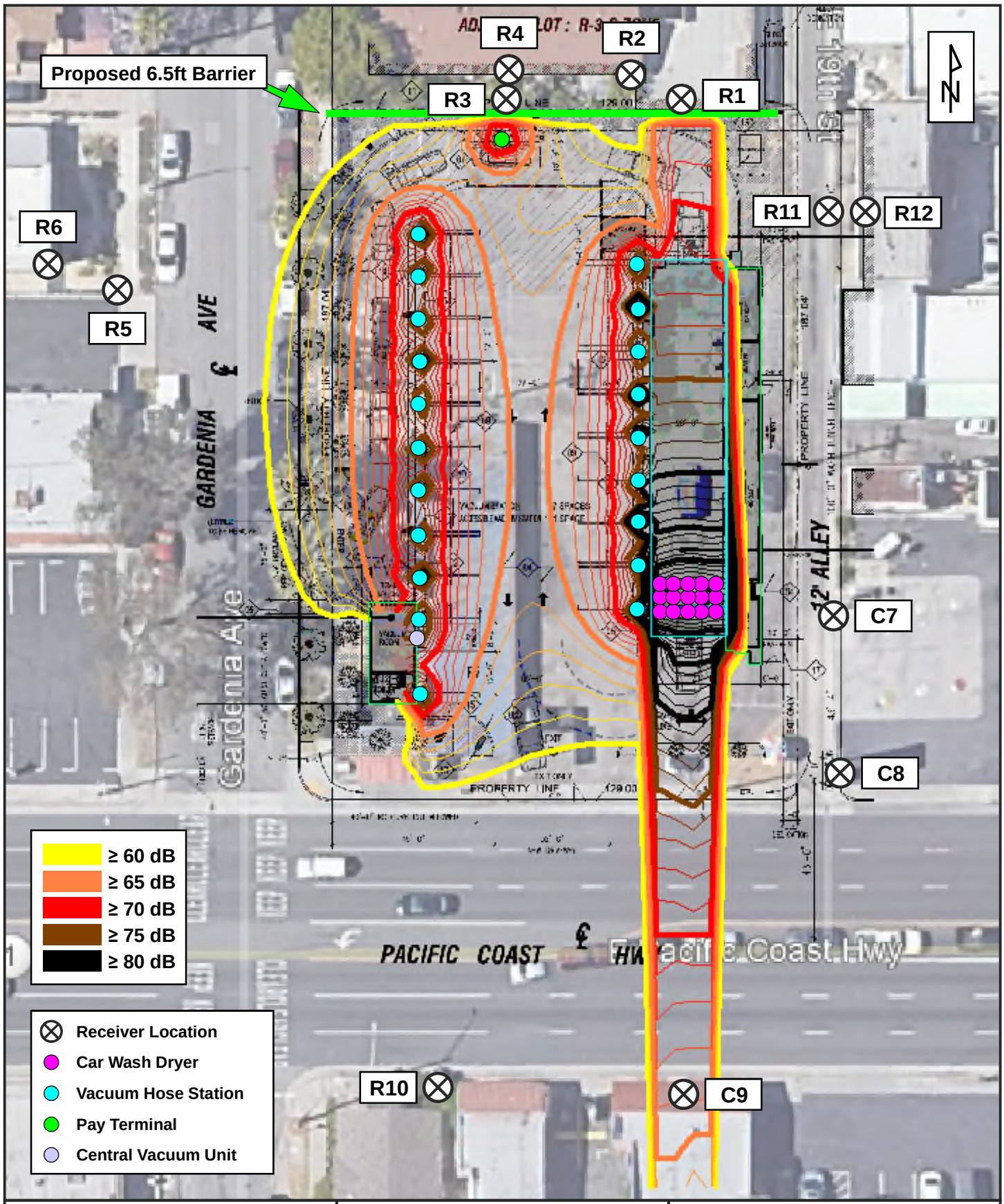
Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Topographic Map** **Job # L200301.3**	**Figure 4**



Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**City of Long Beach** **Noise District Map** **Showing Project Location** **Job # L200301.3**	**Figure 5**



Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Satellite Aerial Photograph Showing Site Plan and Facade Receiver Locations** **Job # L200301.3**	**Figure 6**



Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Satellite Aerial Photograph Showing Site Plan, Equipment Noise Contours, & Receiver Locations - Current Design** **Job # L200301.3**	**Figure 7**



Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Satellite Aerial Photograph Showing Site Plan and Construction Noise Source and Receiver Locations** **Job # L200301.3**	**Figure 8**

APPENDIX A: PROJECT PLANS

EXPRESS CAR WASH BUILDING DEVELOPMENT

STAR EXPRESS CAR WASH

1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806
APN : 7216-032-021

OWNER : SM WASH LLC,
3055 WILSHIRE BLVD STE 405
LOS ANGELES, CA 90010
CONTACT - JOHN LEE
TEL : 949 - 468 - 9089

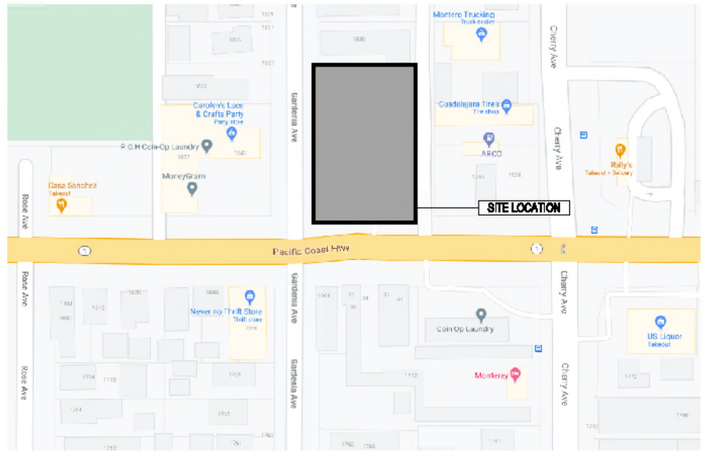
ARCHITECT : GROUPARCH DEVELOPMENT, INC.
3850 WILSHIRE BLVD., #208
LOS ANGELES, CA 90010
CONTACT - YONG K. PARK
TEL : 213 - 383 - 2055

CIVIL ENGINEER : POINT ENGINEERING, INC.
3470 WILSHIRE BLVD. SUITE 645
LOS ANGELES, CA 90010
CONTACT - ERIC KIM
TEL : 213 - 258 - 8451

SOILS ENGINEER : DON SOILS ENGINEERING
2225 S. LA BREA AVE.
LOS ANGELES, CA 90016
CONTACT - DON YIM
TEL : 323 - 936 - 6763

LANDSCAPE : D.S.K. LANDSCAPE ARCHITECTS
3000 WEST 6TH STREET SUITE 300
LOS ANGELES, CA 90010
CONTACT - DAVID KIM
TEL : 213 - 382 - 8113

CONTACT INFORMATION



VICINITY MAP

PROJECT ADDRESS : 1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

LEGAL DESCRIPTION : LOT CODE: 9-12
TRACT: 1319

APN : 7216-032-021

ZONING : EXISTING - CHW, R-3-S
PROPOSED - CCN

LOT SIZE : 24,083 SQ.FT.

PROPOSED BLDG. USE : EXPRESS CAR WASH

PROPOSED BLDG. AREA :

WASH BLDG.	-	3,278 SQ.FT.
TRASH, VACUUM, TOILET BLDG.	-	355 SQ.FT.
MONITORING BLDG.	-	127 SQ.FT.
TOTAL	-	3,760 SQ.FT.

EXISTING LOT COVERAGE & FLOOR AREA RATIO : 3,296 SQ.FT. / 24,083 SQ.FT. (GROSS LOT) - 0.137 : 1.0

PROPOSED LOT COVERAGE & FLOOR AREA RATIO : 3,760 SQ.FT. / 24,083 SQ.FT. (GROSS LOT) - 0.156 : 1.0
3,760 SQ.FT. / 22,460 SQ.FT. (NET LOT EXCLUDING DEDICATIONS) - 0.167 : 1.0

PROPOSED NO. OF STORY : 1-STORY

PROPOSED BLDG. HT. :

WASH BLDG.	-	28'-0"
TRASH, VACUUM, TOILET BLDG.	-	16'-6"
MONITORING BLDG.	-	13'-3"

OCCUPANCY GROUP: : B, S1

REQUIRED PARKING : FOR AUTOMATED CAR WASH - 2 SPACES / 16'-0" LENGTH OF WASH BAY
BELT DRIVEN WASH TUNNEL LENGTH : 100'-0"
100 / 16 = 6.5 6.5X2 = 11-SPACES REQUIRED.

PROVIDED PARKING : STANDARD PARKING (W/ VACUUM) : 17-SPACES
ACCESSIBLE PARKING (W/ VACUUM) : 1-SPACE
TOTAL 18 - PARKING SPACES (W/ VACUUM) PROVIDED

PROJECT DESCRIPTION : CONSTRUCTION OF AN AUTOMATED CARWASH ON A 24,083 SQUARE FOOT LOT. THE SITE WILL BE DEVELOPED WITH A 3,278 SF ONE-STORY CARWASH TUNNEL, AND TWO ONE-STORY ACCESSORY STRUCTURES, A 355 SF BUILDING FOR RESTROOMS AND STORAGE, AND A 127 SF MONITORING BOOTH.
THE REMAINDER OF THE SITE WILL BE DEVELOPED WITH 18 PARKING SPACES EQUIPPED WITH SELF-SERVICE VACUUMS AND APPROX. 2,626 SF OF LANDSCAPE AREA.

PROJECT INFORMATION

ARCHITECTURAL

SEQ.	SHT.	TITLE
1	A-1.0	PROJECT INFORMATION
2		SITE SURVEY
3		EXISTING SITE PLAN
4	A-1.1	SITE PLAN
5	A-1.2	SITE PHOTOS
6	A-1.3	ADJACENT SITES AND BUILDINGS
7	A-1.4	SITE RENDERING
8	A-1.5	SITE RENDERINGS
9	A-2.0	FLOOR PLAN & ROOF PLAN
10	A-3.0	BLDG. ELEVATIONS - WASH TUNNEL BLDG.
11	A-3.1	BLDG. ELEVATIONS - TOILET, VACUUM ROOM BLDG. , MONITORING ROOM BLDG.
12	A-3.2	BLDG. ELEVATIONS W/ ADJACENT BUILDINGS
13	A-4.0	BLDG. SECTIONS
14	A-5.0	DOOR, WINDOW SCHEDULE
15	A-6.0	FINISH MATERIALS

GRADING

1	C-1	TITLE / NOTES
2	C-2	GRADING / DRAINAGE PLAN
3	C-3	LID PLAN
4	C-4	DETAILS
5	C-5	DETAILS

LANDSCAPE

1	L-1	PLANTING PLAN
2	L-2	IRRIGATION PLAN
3	L-3	IRRIGATION & PLANTING DETAILS

SIGNAGE

1	SN-1	SIGN PLAN - SIGN LOCATION & DIMENSIONS
2	SN-2	SIGN PLAN - SIGN INSTALLATION DETAIL AND MONUMENT SIGN

SHEET INDEX

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GROUPARCH DEVELOPMENT, INC.
ARCHITECTURE, PLANNING, INTERIORS, CONSULTANTS
3850 WILSHIRE BLVD. SUITE 208
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TEL : 213 - 383 - 2055
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E-mail : GArch@GroupArch.net

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LICENSED ARCHITECT
YONG K. PARK
C-24806
4-30-21
STATE OF CALIFORNIA

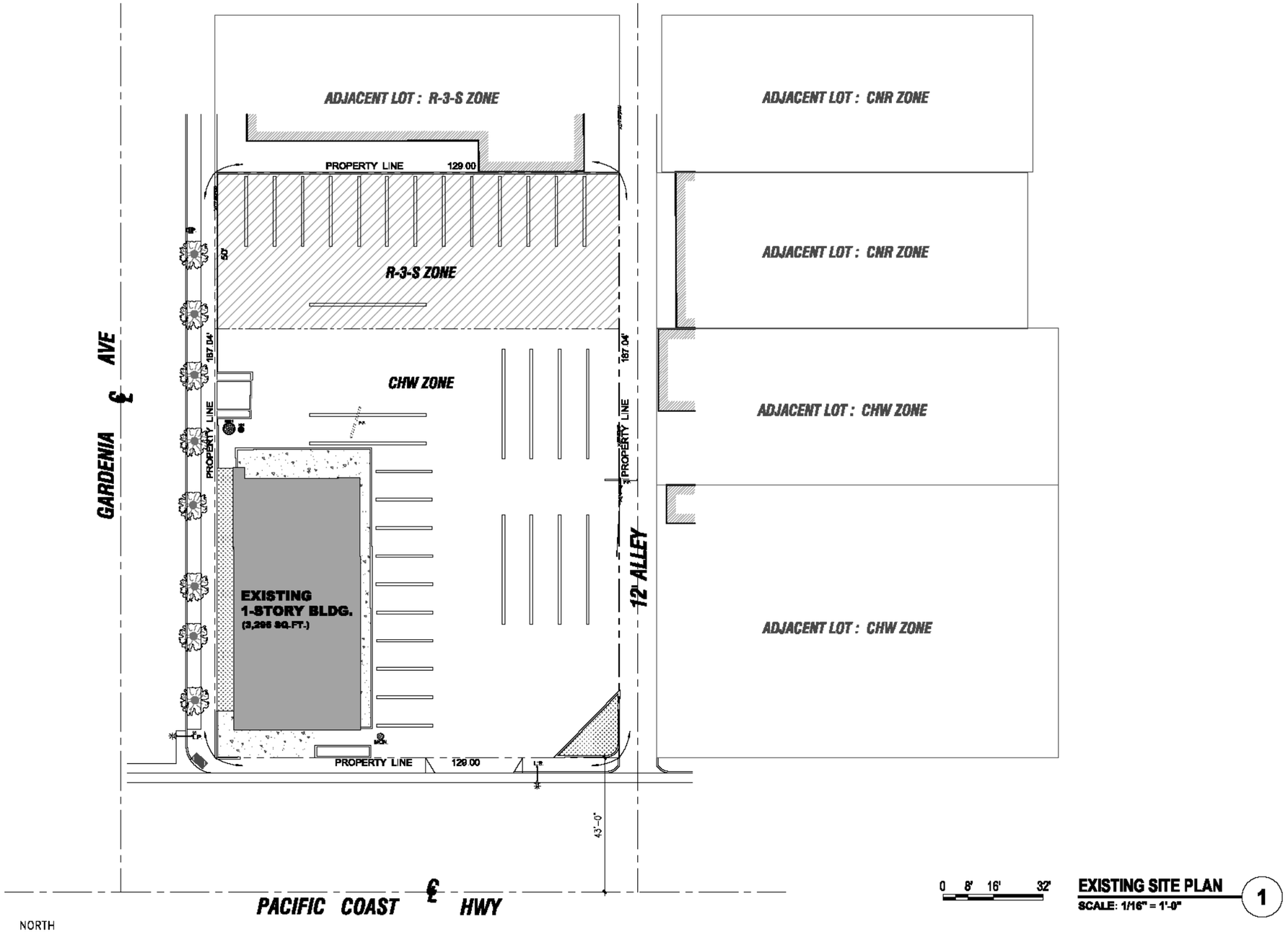
EXPRESS CAR WASH DEVELOPMENT FOR
STAR EXPRESS CAR WASH
1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE
PROJECT INFORMATION

NO	DATE	
	12.8.2020	SUBMIT FOR PRE-APPLICATION
	3.3.2021	SUBMIT FOR LID
	7.12.2021	SUBMIT FOR CUP (PROPOSED FOR ZONE)

PRINT DATE 7/12/2021
SCALE
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SHEET
A-1.0



EXISTING SITE PLAN 1

SCALE: 1/16" = 1'-0"

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GROUPARCH. DEVELOPMENT, INC.
ARCHITECTURE, PLANNING, INTERIORS, CONSULTANTS
3960 WILSHIRE BLVD. SUITE 906
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FAX : 213 - 387 - 5887
E-mail : GHlee@Grouparch.net

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C-24806
4-30-11
STATE OF CALIFORNIA

EXPRESS CAR WASH DEVELOPMENT FOR

STAR EXPRESS CAR WASH

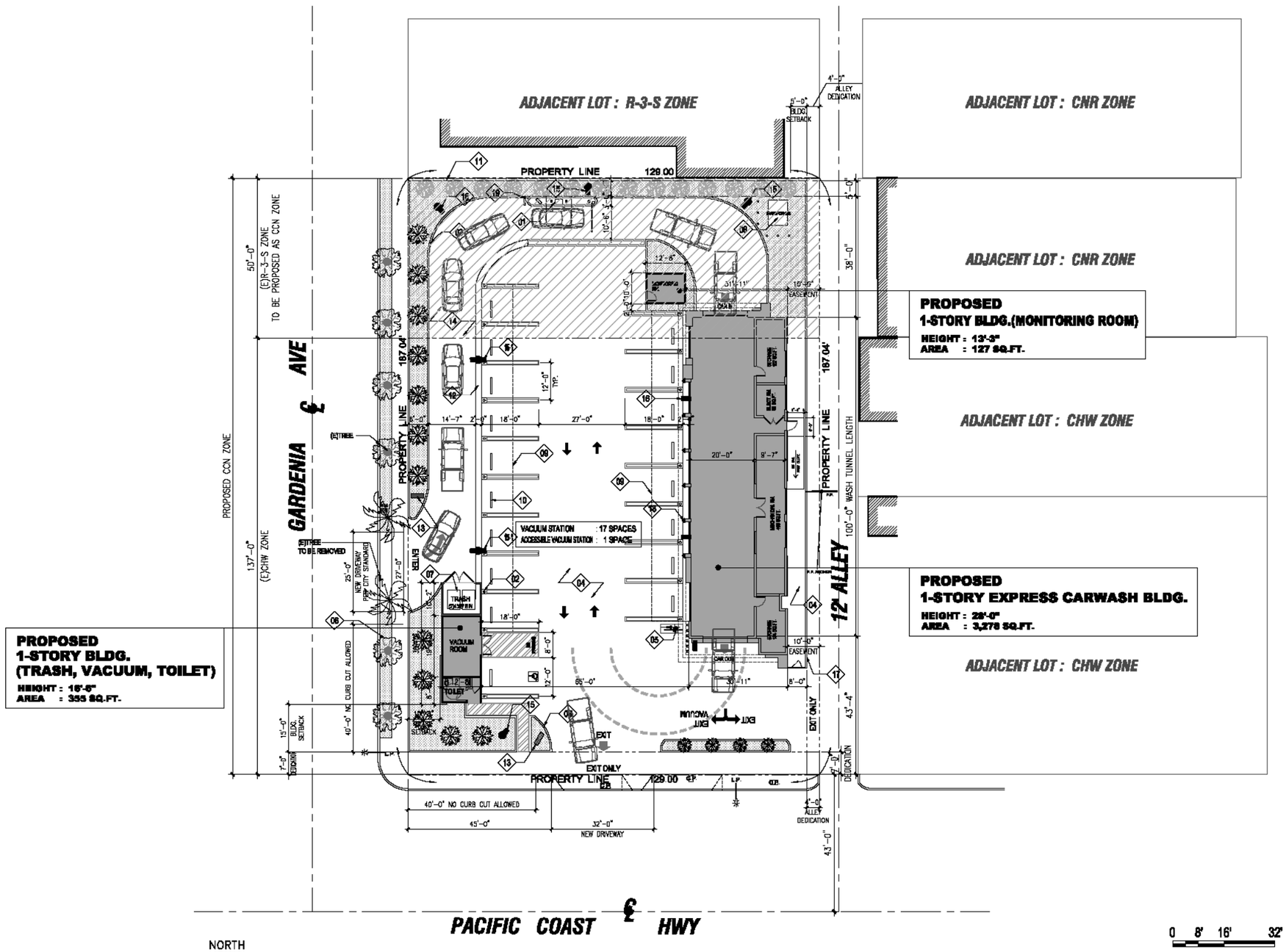
1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE

EXISTING SITE PLAN

NO	DATE

PRINT DATE 7/22/2011
SCALE
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SHEET



0 8' 16' 32'

SITE PLAN
SCALE: 1/16" = 1'-0"

1

KEY NOTES :

01 8'-0" X 18'-0" PAY STATION W/ SPEAKER (TYP.)
02 POST FOR VACUUM OUTLET/TRASH RECEPTACLE WITH COMPRESSED AIR & WATER OUTLET (TYP.)
03 6" CONC. CURB
04 CONCRETE PAVING
05 BICYCLE RACK
06 (N) ROUND CURB CUT DRIVEWAY
07 TRASH ENCLOSURE
08 6'X8' CONC. PAD FOR TRANSFORMER
09 VACUUM CANOPY ABOVE (TYP.)
10 WHEEL STOP (TYP.)
11 6'-8" HIGH DECORATIVE MASONRY WALL
12 18" HIGH CONC. CURB
13 MONUMENT SIGN. SEE SIGN PLAN FOR MORE DETAILS
14 COLORED CONCRETE
15 25FT. HT. LIGHT POLE. W/ 1 LIGHT HEAD (TYP) SEE MATERIAL KEY NOTE 19 ON A-8.0
S1 25FT. HT. LIGHT POLE. W/ 2 LIGHT HEADS SEE MATERIAL KEY NOTE 19 ON A-8.0
16 PARKING LOT LIGHT AT PARAPET (TYP.) SEE MATERIAL KEY NOTE 20 ON A-8.0
17 8'-0" HIGH METAL FENCE
18 EXTERIOR WALLSCONE (TYP.)
19 STL PIPE BOLLARD

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C-24806
4-30-21
STATE OF CALIFORNIA

EXPRESS CAR WASH DEVELOPMENT FOR

STAR EXPRESS CAR WASH

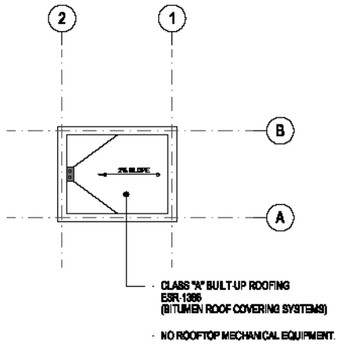
1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE
SITE PLAN

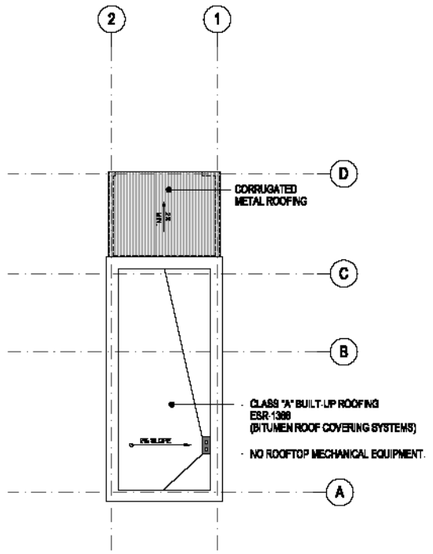
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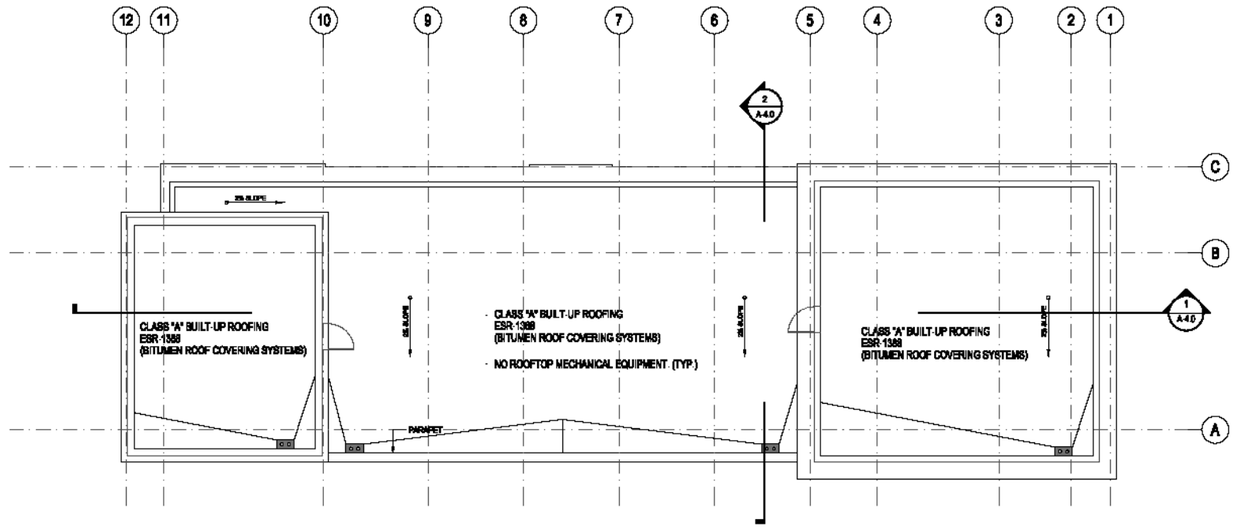
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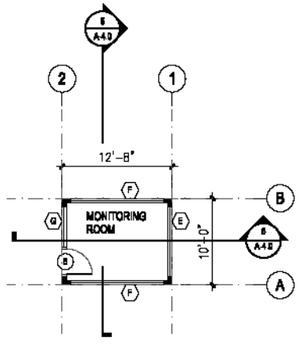
MONITORING RM. ROOF PLAN 6
SCALE: 1/8" = 1'-0"



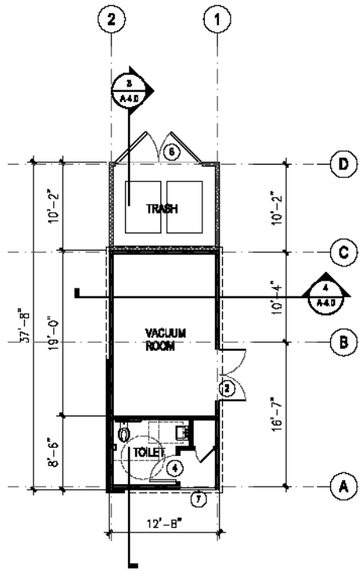
TOILET, VACUUM RM BLDG. ROOF PLAN 4
SCALE: 1/8" = 1'-0"



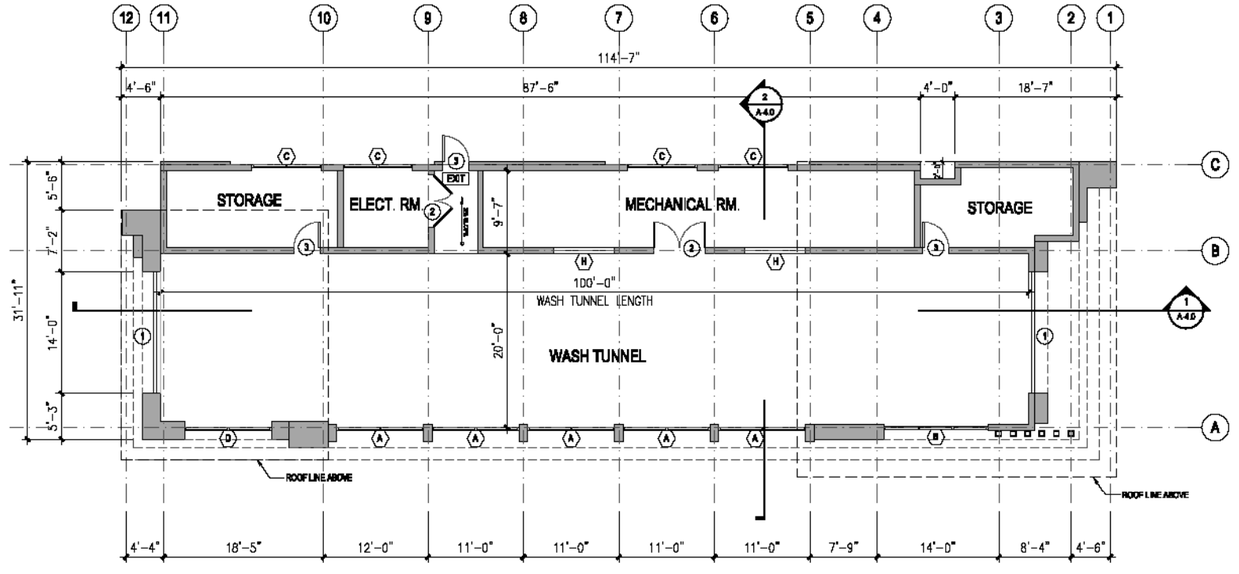
WASH TUNNEL BLDG. ROOF PLAN 2
SCALE: 1/8" = 1'-0"



MONITORING RM. FLOOR PLAN 5
SCALE: 1/8" = 1'-0"



TOILET, VACUUM RM BLDG. FLOOR PLAN 3
SCALE: 1/8" = 1'-0"



WASH TUNNEL BLDG. FLOOR PLAN 1
SCALE: 1/8" = 1'-0"

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LICENSED ARCHITECT
JONG K. PARK
C-24806
4-30-13
STATE OF CALIFORNIA

EXPRESS CAR WASH DEVELOPMENT FOR

STAR EXPRESS CAR WASH

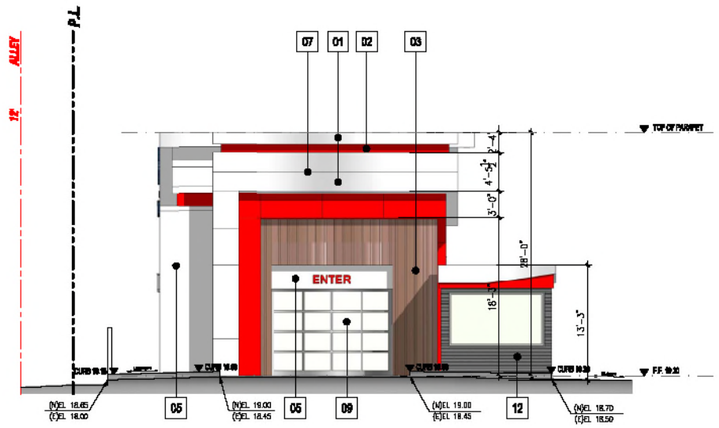
1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE
FLOOR PLAN & ROOF PLAN

NO	DATE

PRINT DATE 7/22/2013
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A-2.0



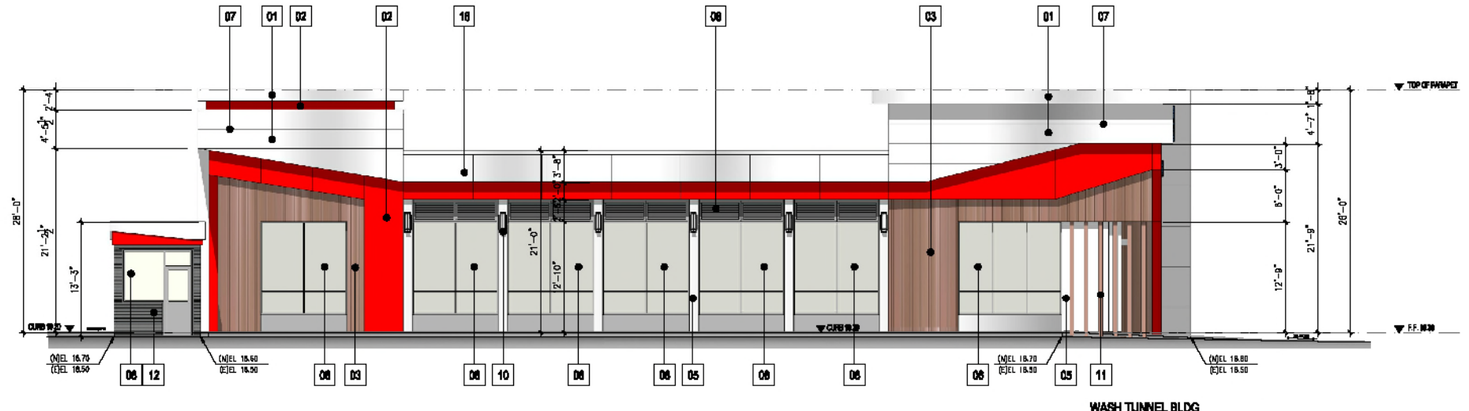
WASH TUNNEL BLDG
NORTH ELEVATION
SCALE: 1/8" = 1'-0" 4



WASH TUNNEL BLDG
SOUTH ELEVATION
SCALE: 1/8" = 1'-0" 3



WASH TUNNEL BLDG
EAST ELEVATION
SCALE: 1/8" = 1'-0" 2



WASH TUNNEL BLDG
WEST ELEVATION
SCALE: 1/8" = 1'-0" 1

ELEVATION KEY NOTES:

01	METAL CLAD EXTERIOR WALL PANEL COLOR 1 (WHITE MATTE)
02	METAL CLAD EXTERIOR WALL PANEL COLOR 2 (RED GLOSS)
03	METAL CLAD EXTERIOR WALL PANEL COLOR 3 (DARK COPPER)
04	METAL CLAD EXTERIOR WALL PANEL COLOR 4 (LIGHT SILVER)
05	EXTERIOR CEMENT PLASTER SMOOTH FINISH
06	TEMPERED CLEAR GLASS W/ ALUM. FRAME (TYP.) SEE WINDOW SCDL. FOR SIZE ON A-3.0
07	3/8" PANEL REVEAL
08	ALUMINUM LOUVER
09	OVERHEAD SECTIONAL DOOR
10	WALL SCONCE
11	POWDER COATED ALUM. CLADDING COLOR 3 (DARK COPPER)
12	METAL SIDING
13	PAINTED METAL DOOR (ALL SOLID DOOR TYP.)
14	CORRUGATED METAL SHEET
15	VACUUM STATION ALUMINUM CANOPY
16	6'-0" HIGH METAL FENCE
17	TRASH ROOM DOOR
18	ILLUMINATED INDIVIDUAL CHANNEL WALL SIGNS SEE SIGN PLAN SN-1,2

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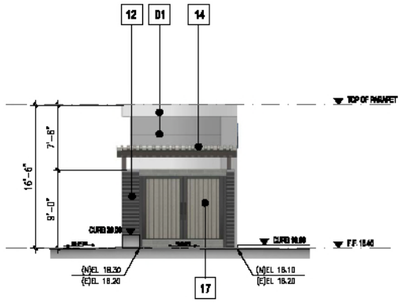
EXPRESS CAR WASH DEVELOPMENT FOR
STAR EXPRESS CAR WASH
1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE
BLDG. ELEVATIONS - WASH TUNNEL BLDG.

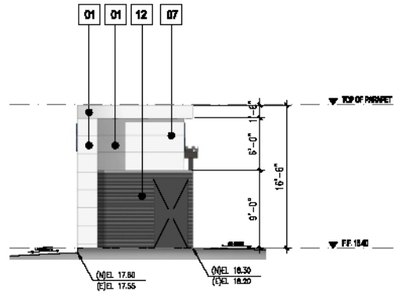
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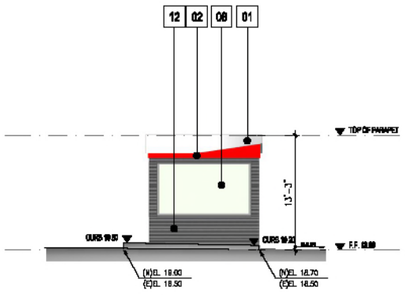
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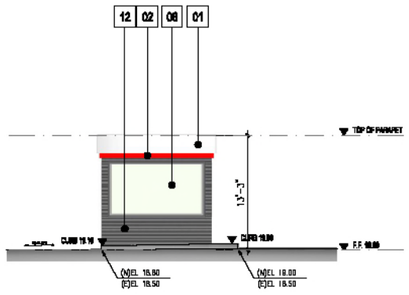
TOILET, VACUUM RM. BLDG.
NORTH ELEVATION
SCALE: 1/8" = 1'-0" — 4



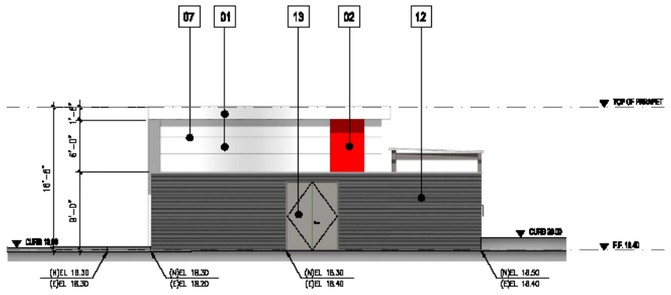
TOILET, VACUUM RM. BLDG.
SOUTH ELEVATION
SCALE: 1/8" = 1'-0" — 3



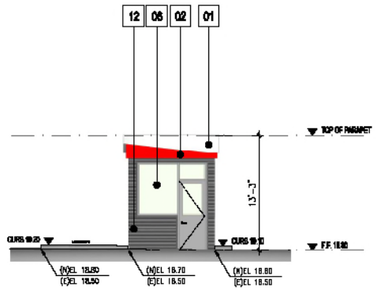
MONITORING RM. BLDG.
NORTH ELEVATION
SCALE: 1/8" = 1'-0" — 8



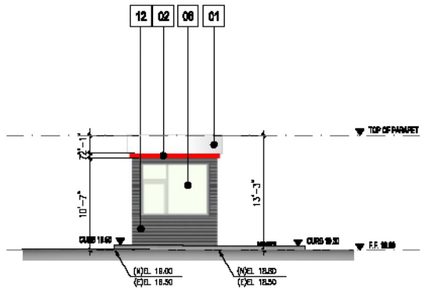
MONITORING RM. BLDG.
SOUTH ELEVATION
SCALE: 1/8" = 1'-0" — 7



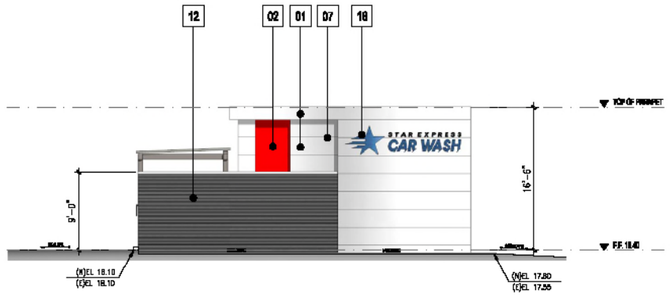
TOILET, VACUUM RM. BLDG.
EAST ELEVATION
SCALE: 1/8" = 1'-0" — 2



MONITORING RM. BLDG.
WEST ELEVATION
SCALE: 1/8" = 1'-0" — 6



MONITORING RM. BLDG.
EAST ELEVATION
SCALE: 1/8" = 1'-0" — 5



TOILET, VACUUM RM. BLDG.
WEST ELEVATION
SCALE: 1/8" = 1'-0" — 1

ELEVATION KEY NOTES:

01	METAL CLAD EXTERIOR WALL PANEL COLOR-1 (WHITE MATTE)
02	METAL CLAD EXTERIOR WALL PANEL COLOR-2 (RED GLOSS)
03	METAL CLAD EXTERIOR WALL PANEL COLOR-3 (DARK COPPER)
04	METAL CLAD EXTERIOR WALL PANEL COLOR-4 (LIGHT SILVER)
05	EXTERIOR CEMENT PLASTER SMOOTH FINISH
06	TEMPERED CLEAR GLASS W/ ALUM. FRAME (TYP.) SEE WINDOW SCDL. FOR SIZE ON A-9.0
07	3/8" PANEL REVEAL
08	ALUMINUM LOUVER
09	OVERHEAD SECTIONAL DOOR
10	WALL SCONCE
11	POWDER COATED ALUM. CLADDING COLOR-3 (DARK COPPER)
12	METAL SIDING
13	PAINTED METAL DOOR (ALL SOLID DOOR TYP.)
14	CORRUGATED METAL SHEET
15	VACUUM STATION ALUMINUM CANOPY
16	6'-0" HIGH METAL FENCE
17	TRASH ROOM DOOR
18	ILLUMINATED INDIVIDUAL CHANNEL WALL SIGNS SEE SIGN PLAN SN-1,2

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4-30-21
STATE OF CALIFORNIA

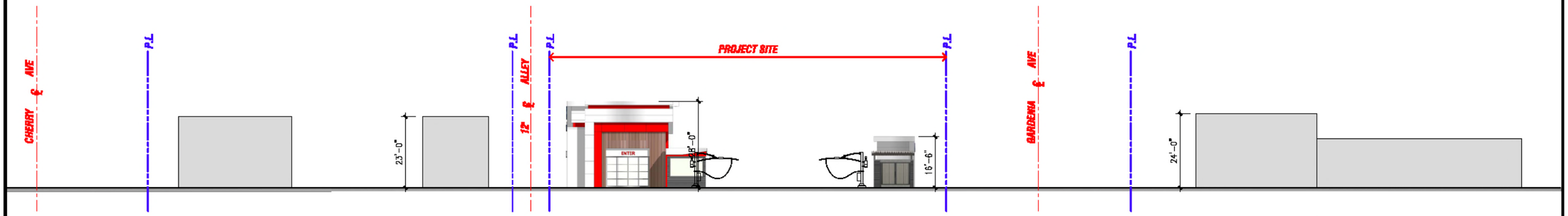
EXPRESS CAR WASH DEVELOPMENT FOR
STAR EXPRESS CAR WASH
1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE
BLDG. ELEVATIONS - TOILET, VACUUM RM. BLDG. MONITORING RM. BLDG.

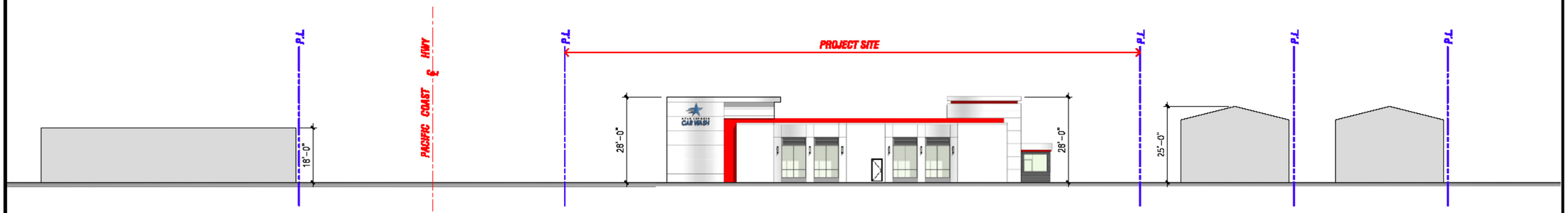
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PRINT DATE: 7/22/2021
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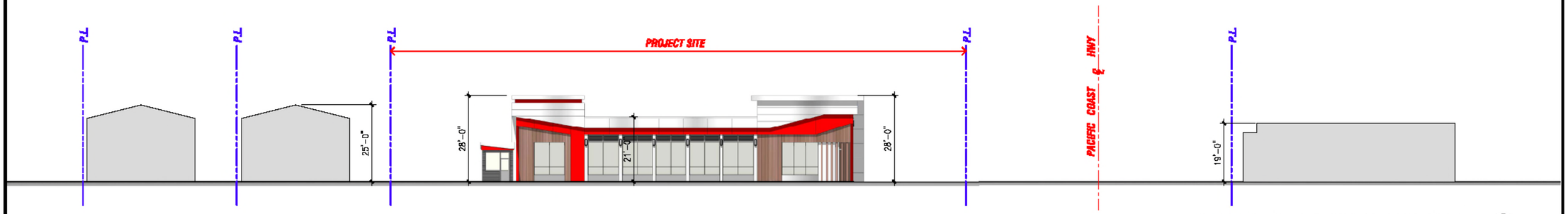
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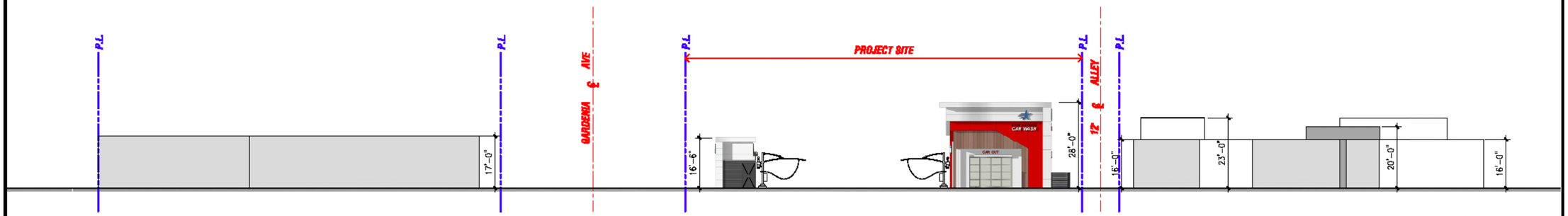
NORTH ELEVATION W/ADJACENT BLDG. 4
SCALE: 1/16" = 1'-0"



EAST ELEVATION W/ADJACENT BLDG. 3
SCALE: 1/16" = 1'-0"



WEST ELEVATION W/ADJACENT BLDG. 2
SCALE: 1/16" = 1'-0"



SOUTH ELEVATION W/ADJACENT BLDG. 1
SCALE: 1/16" = 1'-0"

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A·R·C·H
GROUPARCH DEVELOPMENT, INC.
ARCHITECTURE, PLANNING, INTERIORS, CONSULTANTS
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LICENSED ARCHITECT
JONG K. PARK
C-24806
4-30-12
STATE OF CALIFORNIA

EXPRESS CAR WASH DEVELOPMENT FOR

STAR EXPRESS CAR WASH

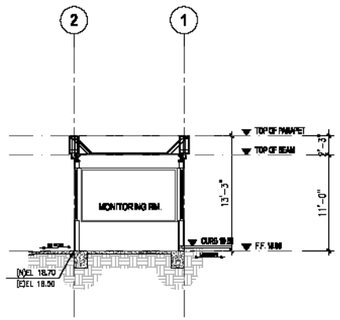
1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE
BLDG. ELEVATIONS W/ ADJACENT BUILDINGS

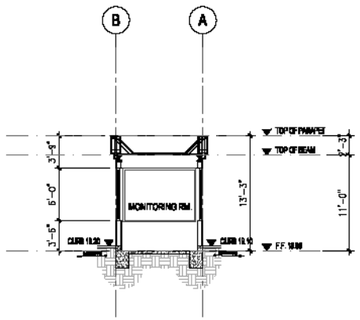
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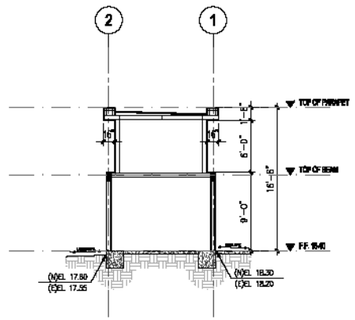
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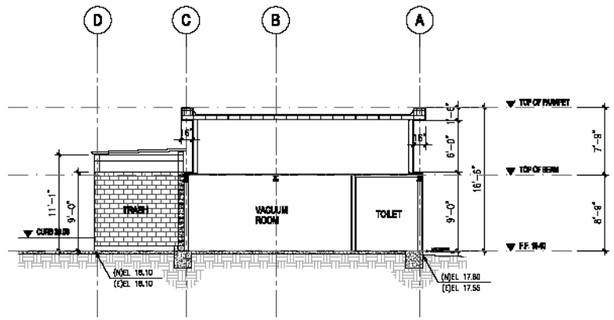
MONITORING RM. BLDG
BLDG. CROSS SECTION 6
SCALE: 1/8" = 1'-0"



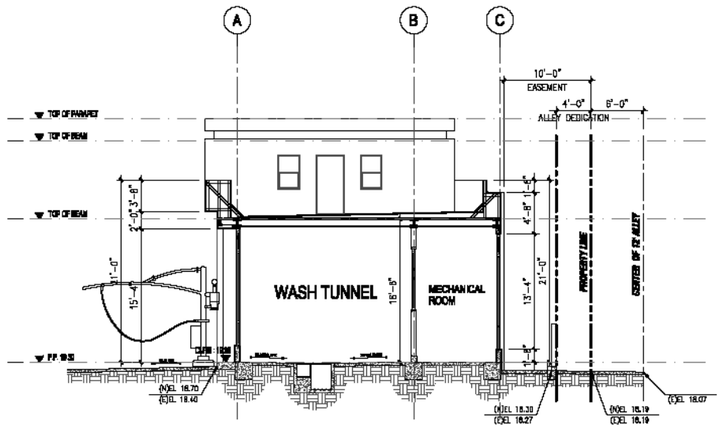
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BLDG. CROSS SECTION 5
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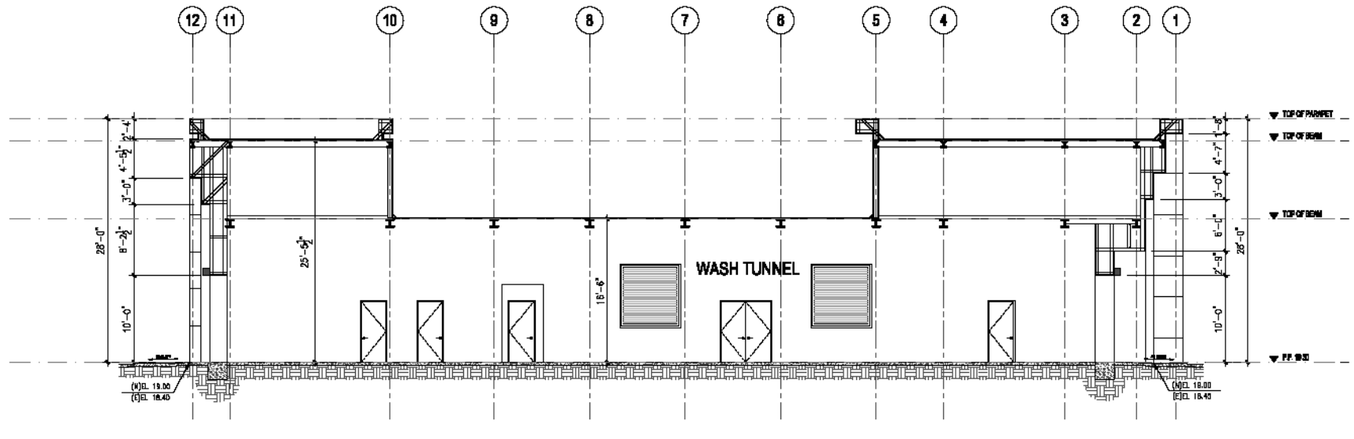
TOILET, VACUUM RM. BLDG
BLDG. CROSS SECTION 4
SCALE: 1/8" = 1'-0"



TOILET, VACUUM RM. BLDG
BLDG. CROSS SECTION 3
SCALE: 1/8" = 1'-0"



WASH TUNNEL BLDG
BLDG. CROSS SECTION 2
SCALE: 1/8" = 1'-0"



WASH TUNNEL BLDG
BLDG. CROSS SECTION 1
SCALE: 1/8" = 1'-0"

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LICENSED ARCHITECT
YONG K. PARK
C-24806
4-30-21
STATE OF CALIFORNIA

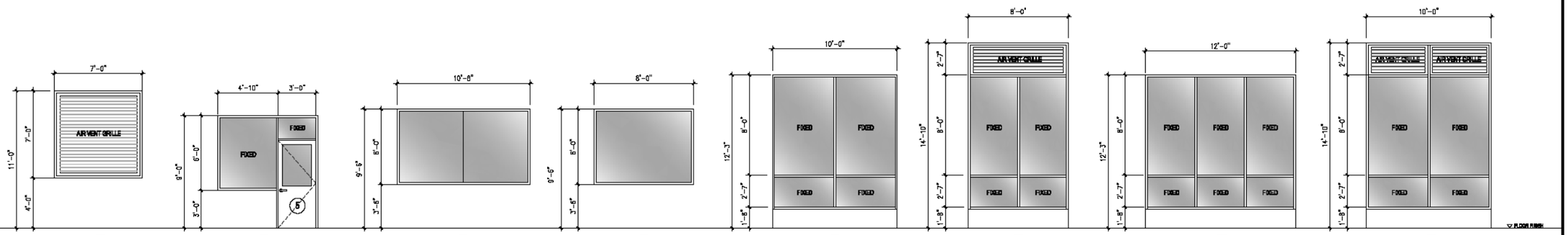
EXPRESS CAR WASH DEVELOPMENT FOR
STAR EXPRESS CAR WASH
1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE
BLDG. SECTIONS

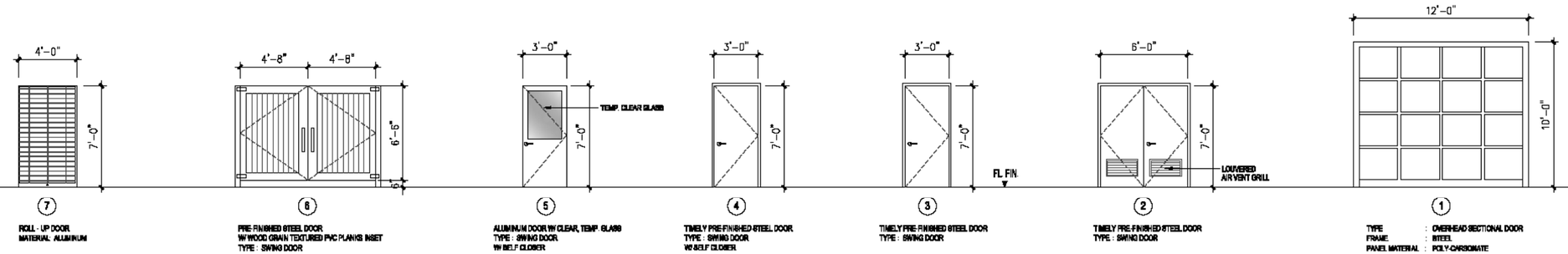
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A-4.0



WINDOW, LOUVER SCHEDULE SCALE : 1/4"=1'-0" (2)



DOOR SCHEDULE SCALE : 1/4"=1'-0" (1)

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LICENSED ARCHITECT
YONG K. PARK
C-24806
EXP. 4.30.21
STATE OF CALIFORNIA

EXPRESS CAR WASH DEVELOPMENT FOR

STAR EXPRESS CAR WASH

1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE

DOOR AND WINDOW SCHEDULES

NO	DATE

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APPENDIX B. APPLICABLE NOISE REGULATIONS

Section 5.507 Environmental Comfort

5.507.4 Acoustical control

Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E90 and ASTM E413 or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.

Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

Exception: [DSA-SS] For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.

5.507.4.1 Exterior noise transmission, prescriptive method

Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

1. Within the 65 CNEL noise contour of an airport.
   Exceptions:
   1. L_{dn} or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.
   2. L_{dn} or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.
2. Within the 65 CNEL or L_{dn} noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan.

5.507.4.1.1 Noise exposure where noise contours are not readily available

Buildings exposed to a noise level of 65 dB L_{eq}-1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

5.507.4.2 Performance method

For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (L_{eq}-1Hr) of 50 dBA in occupied areas during any hour of operation.

5.507.4.2.1 Site features

Exterior features such as sound walls or earth berms may be utilized as appropriate to the building,addition or alteration project to mitigate sound migration to the interior.

5.507.4.2.2 Documentation of compliance

An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

5.507.4.3 Interior sound transmission

Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

Note: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: http://www.toolbase.org/PDF/CaseStudies/stc_icc_ratings.pdf.

8.80.150 - Exterior noise limits—Sound levels by receiving land use district.

A. The noise standards for the various land use districts identified by the noise control office as presented in Table A in Section 8.80.160 shall, unless otherwise specifically indicated, apply to all such property within a designated district.

B. No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured from any other property, either incorporated or unincorporated, to exceed:

   1. The noise standard for that land use district as specified in Table A in Section 8.80.160 for a cumulative period of more than thirty (30) minutes in any hour; or
   2. The noise standard plus five (5) decibels for a cumulative period of more than fifteen (15) minutes in any hour; or
   3. The noise standard plus ten (10) decibels for a cumulative period of more than five (5) minutes in any hour; or
   4. The noise standard plus fifteen (15) decibels for a cumulative period of more than one (1) minute in any hour; or
   5. The noise standard plus twenty (20) decibels or the maximum measured ambient, for any period of time.

C. If the measured ambient level exceeds that permissible within any of the first four (4) noise limit categories in Subsection B of this Section, the allowable noise exposure standard shall be increased in five (5) decibels increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category in Subsection B of this Section, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

D. If the measurement location is on a boundary between two (2) different districts, the noise level limit applicable shall be the arithmetic mean of the two (2) districts.

E. If possible, the ambient noise shall be measured at the same location along the property line utilized in Subsection B of this Section, with the alleged offending noise source inoperative. If for any reason the alleged offending noise source cannot be shut down, then the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such that the offending noise from the source is inaudible. If the difference between the noise levels with noise source operating and not operating is six (6) decibels or greater, then the noise measurement of the alleged source can be considered valid with a small correction applied to account for the contribution of the ambient noise. The correction is to be applied in accordance with data shown in Table B in Section 8.80.160.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.6 (a))

8.80.160 - Exterior noise limits—Correction for character of sound.

In the event that alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits set forth in Table A shall be reduced by five (5) decibels.

Table A
EXTERIOR NOISE LIMITS

Receiving Land Use District*	Time Period	Noise Level** (dBA)
District One	Night:	
	10:00 p.m.—7:00 a.m.	45
	Day:	
	7:00 a.m.—10:00 p.m.	50
District Two	Night:	
	10:00 p.m.—7:00 a.m.	55
	Day:	
	7:00 a.m.—10:00 p.m.	60
District Three	Any time	65
District Four	Any time	70
District Five	Regulated by other agencies and laws	
*District One:	Predominantly residential with other land use types also present	
District Two:	Predominantly commercial with other land use types also present	

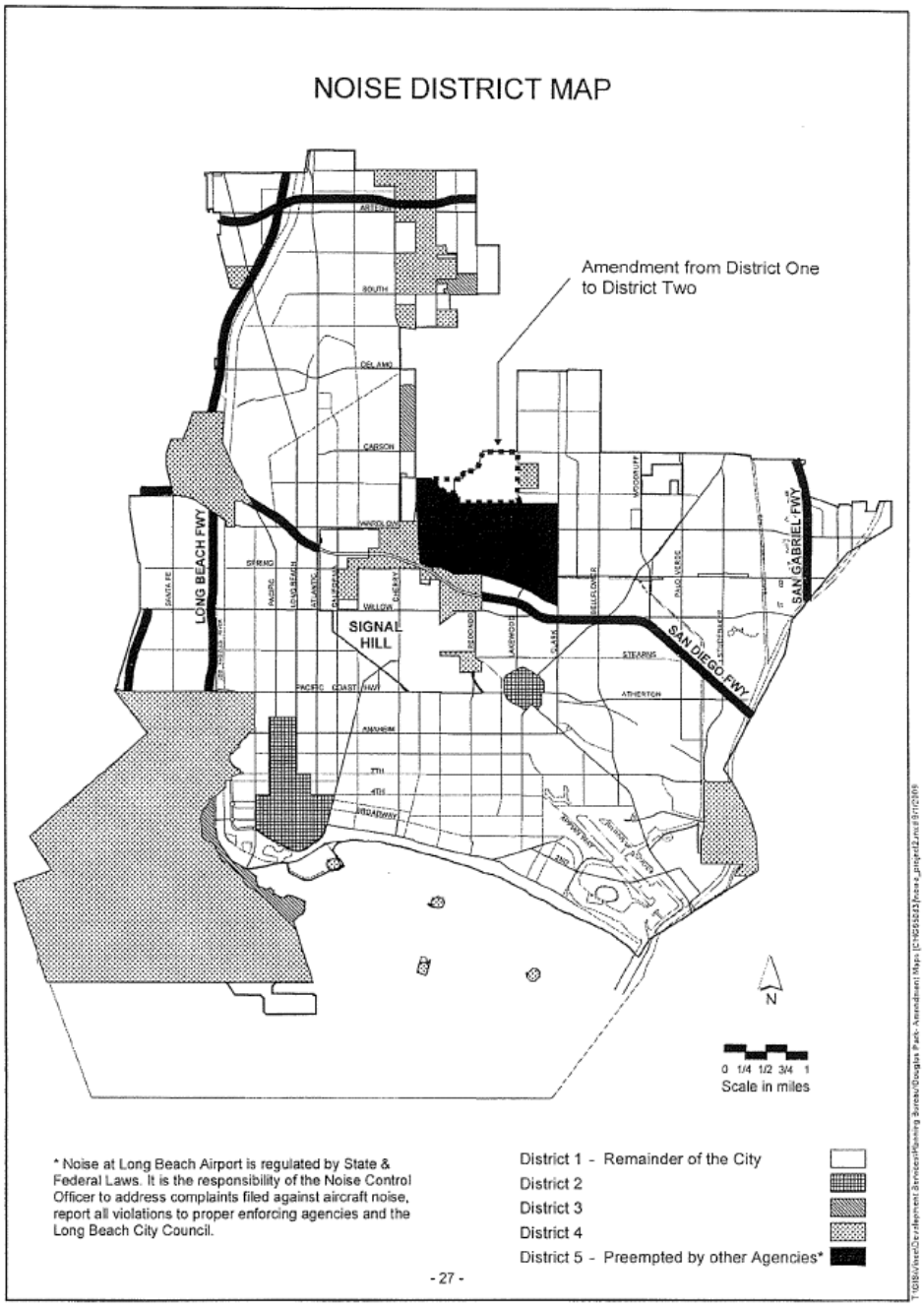
Districts Three and Four:	Predominantly industrial with other land types use also present
District Five:	Airport, freeways and waterways regulated by other agencies

** Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.

Table B

BACKGROUND NOISE CORRECTION

Difference between total noise and background noise alone (decibels)	Amount to be subtracted from
6—8	1
9—10	.5



(ORD-09-0030, § 1(exh. A), 2009; Ord. C-7959 § 1 (exh. A), 2004; Ord. C-5371 § 1 (part), 1977: prior code § 4430.6(b))

8.80.170 - Interior noise limits—Maximum sound levels.

A. The interior noise standards for various land use districts as presented in Table C shall apply, unless otherwise specifically indicated, within structures located in designated zones with windows in their normal seasonal configuration.

TABLE C

Receiving Land Use District	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)

1. The removal or rendering inoperative by any person other than for purposes of maintenance, repair replacement, of any noise control device or element of design or noise label of any product identifie Subsection 8.80.040.G and Subsection 8.80.050.C. The Noise Control Officer may, by regulation, list t which constitute violation of this provision,
2. The use of a product, identified under Subsection 8.80.040.G and Subsection 8.80.050.C, which has had a noise control device or element of design or noise label removed or rendered inoperative with knowledge that such action has occurred.

(Ord. C-7745 § 1, 2001; Ord. C-7175 § 1, 1994; Ord. C-6474 § 2, 1988; Ord. C-6036 § 1, 1984; Ord. C-5371 § 1 (part), 1977: prior code § 4430.8(b))

8.80.202 - Construction activity—Noise regulations.

The following regulations shall apply only to construction activities where a building or other related permit is required or was issued by the Building Official and shall not apply to any construction activities within the Long Beach harbor district as established pursuant to Section 201 of the City Charter.

A. Weekdays and federal holidays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of seven p.m. and seven am. the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this Section, a federal holiday shall be considered a weekday.

B. Saturdays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of seven p.m. on Friday and nine a.m. on Saturday and after six p.m. on Saturday, except for emergency work authorized by the Building Official.

C. Sundays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.

D. Owner's/employer's responsibility. It is unlawful for the landowner, construction company owner, contractor, subcontractor or employer of persons working, laboring, building, or assisting in construction to permit construction activities in violation of provisions in this Section.

E. Sunday work permits. Any person who wants to do construction work on a Sunday must apply for a work permit from the Noise Control Officer. The Noise Control Officer may issue a Sunday work permit if there is good cause shown; and in issuing such a permit, consideration will be given to the nature of the work and its proximity to residential areas. The permit may allow work on Sundays, only between nine a.m. and six p.m., and it shall designate the specific dates when it is allowed.

F. Enforcement. Notwithstanding the provisions of Sections 8.80.370 and 8.80.380, this Section may be enforced by a Police Officer.

Any person who violates any provision of this Section is guilty of a misdemeanor and shall be fined in an amount not to exceed five hundred dollars ($500.00), or be imprisoned for a period not to exceed one hundred eighty (180) days, or by both such fine and imprisonment. Each day that a violation occurs shall constitute a separate offense and shall be punishable as such.

Whenever an employee is prosecuted for a violation of this noise control ordinance, the court shall, at the request of the employee, take appropriate action to make the landowner, construction company owner, contractor, subcontractor or employer a codefendant.

(Ord. C-6488 § 1, 1988; Ord. C-6474 § 1, 1988)

8.80.210 - Refuse collection vehicles.

No person shall collect refuse with a refuse collection vehicle between the hours of seven p.m. and seven a.m. the following day in a residential area or noise sensitive zone.

(Ord. C-5371 § 1 (part), 1981: prior code § 4430.9(a))

8.80.220 - Motor vehicle horns.

It is unlawful for any person within the City to sound a vehicular horn within any residential zone except as a warning signal, as provided in the Vehicle Code of the State.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(b))

8.80.230 - Recreational motorized vehicles operating off the public right-of-way.

No person shall operate or cause to be operated any recreational motorized vehicle off a public right-of-way in such a manner that the sound level emitted therefrom violates the provisions of Sections 8.80.150 and 8.80.170. This Section shall apply to all recreational motorized vehicles, whether or not duly licensed and registered, including, but not limited to, commercial or noncommercial racing vehicles, motorcycles, go-carts, amphibious craft, campers, and dune buggies, but not including motorboats.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(c))

8.80.240 - Vehicle, motorboat or aircraft repair and testing.

A. Repairing, rebuilding, modifying or testing any motor vehicle, motorboat or aircraft in such a manner as to create a noise disturbance across a residential real property line, or at any time to violate the provisions of Sections 8.80.150 or 8.80.170 shall not be permitted except where said activities are directly related to officially sanctioned events.
B. This provision shall not apply to aircraft within the airport property or within any other aviation-related property abutting it.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(d))

8.80.250 - Exemption—Emergencies.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☐
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☐
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☐
XIII. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to	☐	☐	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
excessive noise levels?				
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☐
XV. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☐
Fire protection?	☐	☐	☐	☐
Police protection?	☐	☐	☐	☐
Schools?	☐	☐	☐	☐
Parks?	☐	☐	☐	☐
Other public facilities?	☐	☐	☐	☐
XVI. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the	☐	☐	☐	☐

Construction Noise

As noted in a previous section, construction noise is an increasing by-product of new construction and urban redevelopment. This produces special problems of noise control compared with other industrial types. Work is conducted in unenclosed areas and is of a temporary nature. The frequency and intensity of the noise may vary greatly during different phases of the work. Finally, the noise cannot be controlled through land use restrictions as with industrial sites.

Most noise from construction and demolition sites is produced by machinery. The most prominent noise source is equipment fitted with diesel engines. Many of these, but not all, have exhaust silencers or mufflers. With unmuffled diesel equipment producing noise levels of 90 dBA at 100 feet, the introduction of silencers can result in significant noise reductions of the order of 15-18 dBA.

This will apply to graders, scrapers, other excavation equipment, motor generators and diesel trucks. If electrical power is available on a site, the use of electric motors rather than diesels is desirable whenever possible.

Air compressors and other machinery powered by internal combustion engines may be subject to the same muffling requirements and may further be controlled by ensuring that the manufacturer's enclosure is intact and by using enclosed housing where possible.

An overview of the range of noise levels produced by representative construction equipment is shown in Figure 21.

Some numerical criteria should be available by which local authorities and, perhaps, courts could judge whether noise from construction and demolition sites is reasonable or not.

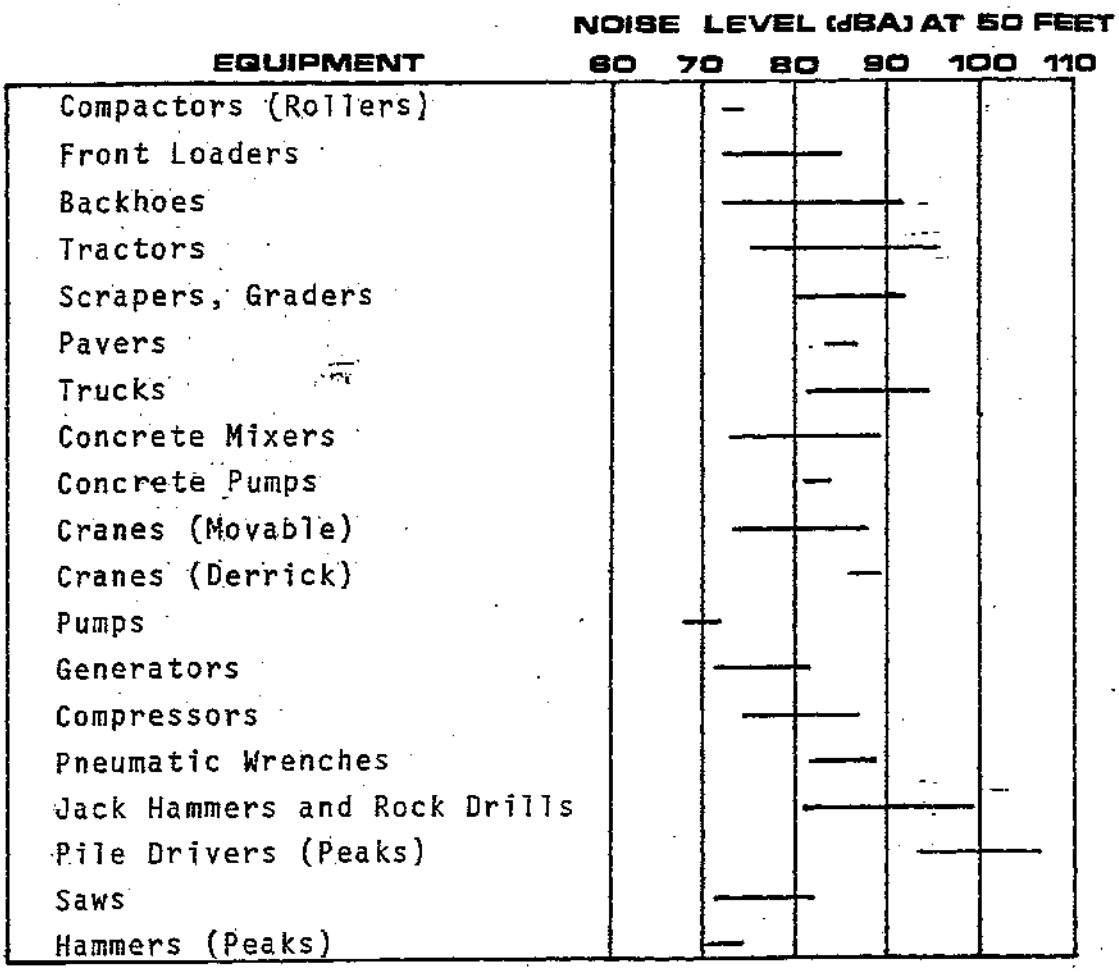


FIGURE 21

Noise Levels for Construction Equipment.

Source: "Engineering and Zoning Regulation of Outdoor Industrial Noise," NOISE Control, 3, 32-38, May 1959. "City Noise-Los Angeles," NOISE Control, 2, 14-19, July 1958.

In considering what criteria would be appropriate in the daytime, most weight is given to the following factors:

1. The noise should not interfere unduly with lives and the work of people in nearby buildings.
2. The work on most construction and demolition sites does not last very long, usually for some weeks or months at most.
3. A great deal of building is done in urban areas where there is noise from other sources, such as traffic.
4. The efficiency of the building industry depends upon the use of machines.
5. Any criterion must be economically and operationally practicable for contractors.

It is concluded that the simplest and most objective criterion is that the noise between 7 a.m. and 7 p.m. should not exceed the level at which conversation to the nearest building would be difficult with the windows shut. Most buildings have single windows which, if new and well fitting, can reduce outside noise levels by 15 dBA. The exterior walls of many existing buildings have ill-fitting windows and provide only about 5 dBA reduction. Moreover, the reduction at low frequencies is less than at high frequencies, thus emphasizing the low frequency components of the intruding noise and tending to make conditions for speech less acceptable. In these circumstances, with a noise level of about 50-55 dBA inside a building, a telephone could be used with some difficulty, and normal conversation carried out at a distance of several feet. This inside level corresponds to a level outside the building, with closed conventional single windows, of 65-70 dBA. To achieve this level of noise, would require the construction industry to restrict noise to a level which is below the

level already produced at times by traffic alone, busy roadways of Long Beach, and below the level existing in some heavy industrial areas. These levels must be practicable and fair to the construction and demolition industries as well as to their neighbors. It is suggested that, at present, average maximum noise levels outside the nearest building at the window of the occupied room closest to the site boundary, should not exceed:

- 70 dBA in areas away from main roads and sources of industrial noise.
- 75 dBA in areas near main roads and heavy industries.

APPENDIX C: CADNA ANALYSIS DATA AND RESULTS

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570
Date: 15 Dec 2021

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.35
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			57.9	-69.1	0.0	0.0		x	Total	1.52	r	134.99	116.89	1.52
R2			58.5	-69.6	0.0	0.0		x	Total	4.57	r	130.78	118.99	4.57
R3			57.5	-69.7	0.0	0.0		x	Total	1.52	r	120.01	116.92	1.52
R4			58.2	-70.1	0.0	0.0		x	Total	4.57	r	120.10	118.93	4.57
R5			58.9	-69.6	0.0	0.0		x	Total	1.52	r	86.90	100.48	1.52
R6			59.5	-70.1	0.0	0.0		x	Total	4.57	r	81.16	102.69	4.57
C7			64.2	-65.2	0.0	0.0		x	Total	1.52	r	147.90	72.81	1.52
C8			69.9	-61.5	0.0	0.0		x	Total	1.52	r	148.27	59.32	1.52
C9			70.9	-61.0	0.0	0.0		x	Total	1.52	r	134.97	32.25	1.52
R10			71.2	-60.8	0.0	0.0		x	Total	1.52	r	114.15	32.75	1.52
R11			59.1	-67.9	0.0	0.0		x	Total	1.52	r	147.63	108.86	1.52
R12			60.1	-67.9	0.0	0.0		x	Total	4.57	r	149.58	108.86	4.57

Roads

Name	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
			Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
			(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(km/h)	(km/h)		(dB)		(%)	(dB)	(m)	(m)
PCH WB			63.8	0.0	0.0			767.0	0.0	0.0	2.1	0.0	0.0	64		6.4	0.0	1	0.0	0.0		
PCH EB			63.9	0.0	0.0			767.0	0.0	0.0	2.4	0.0	0.0	64		6.4	0.0	1	0.0	0.0		
Cherry NB			57.4	0.0	0.0			183.0	0.0	0.0	3.0	0.0	0.0	40		3.96	0.0	1	0.0	0.0		
Cherry SB			57.4	0.0	0.0			183.0	0.0	0.0	3.0	0.0	0.0	40		3.96	0.0	1	0.0	0.0		

Geometry - Roads

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(m)	(%)
	(m)		(m)		(m)	(m)	(m)	(m)		
PCH WB	0.00	r			264.89	51.27	0.00	0.00		
					7.77	51.69	0.00	0.00		
PCH EB	0.00	r			264.26	38.88	0.00	0.00		
					7.14	39.30	0.00	0.00		
Cherry NB	0.00	r			202.09	4.67	0.00	0.00		
					202.26	45.35	0.00	0.00		
					202.09	64.53	0.00	0.00		
					201.46	101.82	0.00	0.00		
					199.15	121.25	0.00	0.00		
					198.94	171.70	0.00	0.00		
Cherry SB	0.00	r			192.59	3.59	0.00	0.00		
					192.59	45.77	0.00	0.00		
					192.43	64.95	0.00	0.00		
					191.80	102.24	0.00	0.00		
					189.48	121.67	0.00	0.00		
					189.27	172.12	0.00	0.00		

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
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Phone: (760) 738-5570
Date: 26 Jul 2021

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.35
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
F1			52.8	-74.1	0.0	0.0		x	Total	1.52	r	129.53	107.20	1.52
F2			59.4	-73.3	0.0	0.0		x	Total	1.52	r	127.18	104.98	1.52
F3			59.8	-72.1	0.0	0.0		x	Total	1.52	r	129.51	102.97	1.52
F4			56.9	-72.5	0.0	0.0		x	Total	1.52	r	132.20	105.05	1.52

Roads

Name	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
			Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
			(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(km/h)	(km/h)		(dB)		(%)	(dB)	(m)	(m)
PCH WB			68.0	0.0	0.0			1993.0	0.0	0.0	2.1	0.0	0.0	64		6.4	0.0	1	0.0	0.0		
PCH EB			68.1	0.0	0.0			1993.0	0.0	0.0	2.4	0.0	0.0	64		6.4	0.0	1	0.0	0.0		
Cherry NB			61.6	0.0	0.0			485.0	0.0	0.0	3.0	0.0	0.0	40		3.96	0.0	1	0.0	0.0		
Cherry SB			61.6	0.0	0.0			485.0	0.0	0.0	3.0	0.0	0.0	40		3.96	0.0	1	0.0	0.0		

Geometry - Roads

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(m)	(%)
	(m)		(m)		(m)	(m)	(m)	(m)		
PCH WB	0.00	r			264.89	51.27	0.00	0.00		
					7.77	51.69	0.00	0.00		
PCH EB	0.00	r			264.26	38.88	0.00	0.00		
					7.14	39.30	0.00	0.00		
Cherry NB	0.00	r			202.09	4.67	0.00	0.00		
					202.26	45.35	0.00	0.00		
					202.09	64.53	0.00	0.00		
					201.46	101.82	0.00	0.00		
					199.15	121.25	0.00	0.00		
					198.94	171.70	0.00	0.00		
Cherry SB	0.00	r			192.59	3.59	0.00	0.00		
					192.59	45.77	0.00	0.00		
					192.43	64.95	0.00	0.00		
					191.80	102.24	0.00	0.00		
					189.48	121.67	0.00	0.00		
					189.27	172.12	0.00	0.00		

Barriers

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
			left	right		horz.	vert.	Begin		End	
					(m)	(m)	(m)	(m)		(m)	
CW1								6.40	r		
CW2								6.40	r		
CW3					2.75			6.40	r		
CW4					2.75			6.40	r		
CW5						6.43	0.00	6.40	r		
Proposed PL Wall	+										

Geometry - Barriers

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height				Coordinates			
			left	right		horz.	vert.	Begin		End		x	y	z	Ground
					(m)	(m)	(m)	(m)		(m)		(m)	(m)	(m)	(m)
CW1								6.40	r			133.26	71.06	6.40	0.00
												132.05	71.06	6.40	0.00
												132.05	102.99	6.40	0.00
												133.26	102.99	6.40	0.00
CW2								6.40	r			137.39	71.06	6.40	0.00
												138.46	71.06	6.40	0.00
												138.46	102.99	6.40	0.00
												137.39	102.99	6.40	0.00
CW3					2.75			6.40	r			132.05	71.06	6.40	0.00
												138.46	71.06	6.40	0.00
CW4					2.75			6.40	r			132.05	102.99	6.40	0.00
												138.46	102.99	6.40	0.00
CW5						6.43	0.00	6.40	r			132.05	102.99	6.40	0.00
												132.05	71.06	6.40	0.00
Proposed PL Wall	+											141.60	115.58	1.98	0.00
												130.71	115.57	1.98	0.00
												130.62	115.57	1.98	0.00
												104.99	115.57	1.98	0.00

Buildings

Name	M.	ID	RB	Residents	Absorption	Height	
						Begin	
						(m)	
Vac-RR Building				0		5.03	r
CW Building	+			0		6.40	r
Monitoring Room Building	+			0		3.96	r

Geometry - Buildings

Name	M.	ID	RB	Residents	Absorption	Height		Coordinates			
						Begin		x	y	z	Ground
						(m)		(m)	(m)	(m)	(m)
Vac-RR Building				0		5.03	r	108.12	65.35	5.03	0.00
								112.23	65.37	5.03	0.00
								112.23	73.95	5.03	0.00
								108.12	73.96	5.03	0.00
CW Building	+			0		6.40	r	138.46	69.92	6.40	0.00
								139.10	69.91	6.40	0.00
								139.10	69.66	6.40	0.00
								140.30	69.66	6.40	0.00
								140.31	68.64	6.40	0.00
								141.38	68.64	6.40	0.00
								141.36	102.29	6.40	0.00
								138.46	102.29	6.40	0.00
Monitoring Room Building	+			0		3.96	r	127.71	103.54	3.96	0.00
								127.74	106.60	3.96	0.00
								131.56	106.56	3.96	0.00
								131.60	103.49	3.96	0.00

Eilar Associates, Inc.
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Phone: (760) 738-5570
Date: 15 Dec 2021

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.35
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			57.0	56.9	60.0	0.0				1.52	r	134.99	116.89	1.52
R2			56.2	55.7	60.0	0.0				4.57	r	130.78	118.99	4.57
R3			51.3	45.5	60.0	0.0				1.52	r	120.01	116.92	1.52
R4			57.7	55.1	60.0	0.0				4.57	r	120.10	118.93	4.57
R5			54.7	54.5	60.0	0.0				1.52	r	86.90	100.48	1.52
R6			52.9	52.8	60.0	0.0				4.57	r	81.16	102.69	4.57
C7			52.2	52.2	65.0	0.0				1.52	r	147.90	72.81	1.52
C8			51.5	51.5	70.0	0.0				1.52	r	148.27	59.32	1.52
C9			65.7	65.7	75.0	0.0				1.52	r	134.97	32.25	1.52
R10			51.4	51.4	75.0	0.0				1.52	r	114.15	32.75	1.52
R11			51.5	51.1	75.0	0.0				1.52	r	147.63	108.86	1.52
R12			50.9	50.3	75.0	0.0				4.57	r	149.58	108.86	4.57

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m^2)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
V1.1	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.40	66.11	1.52
V1.2	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.41	72.48	1.52
V2	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.39	76.12	1.52
V3	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.39	79.82	1.52
V4	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.36	83.42	1.52
V5	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.35	87.09	1.52
V6	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.36	90.79	1.52
V7	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.39	94.38	1.52
V8	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.36	98.05	1.52
V9.1	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.35	101.71	1.52
V9.2	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	112.38	105.34	1.52
V10	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.07	102.70	1.52
V11	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.06	98.98	1.52
V12	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.05	95.37	1.52
V13	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.04	91.67	1.52
V14	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.05	88.02	1.52
V15	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.06	84.35	1.52
V16	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.04	80.76	1.52
V17.1	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.06	77.12	1.52
V17.2	+		83.3	83.3	83.3	Lw	V		0.0	0.0	0.0							0.0		(none)	1.52	r	131.05	73.43	1.52
DT1	+		84.5	84.5	84.5	Lw	DT		0.0	0.0	0.0				30.00	0.00	0.00	0.0	500	(none)	1.22	r	119.43	113.30	1.22
D1	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	133.01	75.46	2.44
D2	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	134.11	75.44	2.44
D3	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	135.34	75.43	2.44
D4	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	136.38	75.46	2.44
D5	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	137.56	75.46	2.44
D6	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	132.92	74.47	2.44
D7	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	134.07	74.49	2.44
D8	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	135.32	74.52	2.44
D9	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	136.43	74.51	2.44
D10	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	137.60	74.52	2.44
D11	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	132.91	73.50	2.44
D12	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	134.13	73.50	2.44
D13	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	135.36	73.52	2.44
D14	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	136.43	73.51	2.44
D15	+		98.0	98.0	98.0	Lw	S1		0.0	0.0	0.0							0.0		(none)	2.44	r	137.69	73.53	2.44

Barriers

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
			left	right		horz.	vert.	Begin		End	
					(m)	(m)	(m)	(m)		(m)	
CW1								6.40	r		
CW2								6.40	r		
CW3					2.75			6.40	r		
CW4					2.75			6.40	r		
CW5						6.43	0.00	6.40	r		
CW5	+					6.43	0.00	6.40	r		
Proposed PL Wall	+										

Geometry - Barriers

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height				Coordinates			
			left	right		horz.	vert.	Begin		End		x	y	z	Ground
					(m)	(m)	(m)	(m)		(m)		(m)	(m)	(m)	(m)
CW1								6.40	r			133.26	71.06	6.40	0.00
												132.05	71.06	6.40	0.00
												132.05	102.99	6.40	0.00
												133.26	102.99	6.40	0.00
CW2								6.40	r			137.39	71.06	6.40	0.00
												138.46	71.06	6.40	0.00
												138.46	102.99	6.40	0.00
												137.39	102.99	6.40	0.00
CW3					2.75			6.40	r			132.05	71.06	6.40	0.00
												138.46	71.06	6.40	0.00
CW4					2.75			6.40	r			132.05	102.99	6.40	0.00
												138.46	102.99	6.40	0.00
CW5						6.43	0.00	6.40	r			132.05	102.99	6.40	0.00
												132.05	71.06	6.40	0.00
CW5	+					6.43	0.00	6.40	r			138.48	102.99	6.40	0.00
												138.48	71.06	6.40	0.00
Proposed PL Wall	+											141.60	115.58	1.98	0.00
												130.71	115.57	1.98	0.00
												130.62	115.57	1.98	0.00
												104.99	115.57	1.98	0.00

Buildings

Name	M.	ID	RB	Residents	Absorption	Height	
						Begin	
						(m)	
Vac-RR Building				0		5.03	r
CW Building	+			0		6.40	r

Geometry - Buildings

Name	M.	ID	RB	Residents	Absorption	Height		Coordinates			
						Begin		x	y	z	Ground
						(m)		(m)	(m)	(m)	(m)
Vac-RR Building				0		5.03	r	108.12	65.35	5.03	0.00
								112.23	65.37	5.03	0.00
								112.23	73.95	5.03	0.00
								108.12	73.96	5.03	0.00
CW Building	+			0		6.40	r	138.46	69.92	6.40	0.00
								139.10	69.91	6.40	0.00
								139.10	69.66	6.40	0.00
								140.30	69.66	6.40	0.00
								140.31	68.64	6.40	0.00
								141.38	68.64	6.40	0.00
								141.36	102.29	6.40	0.00
								138.46	102.29	6.40	0.00

Sound Level Spectra

Name	ID	Type	1/3 Oktave Spectrum (dB)											Source
			Weight.	63	125	250	500	1000	2000	4000	8000	A	lin	
15HP Tech 21 - PowerLocks Closed	S1	Lw (c)		90.8	94.8	91.8	92.2	93.3	91.4	88.9	85.7	98.0	100.8	Manufacturer
15HP Tech 21 - PowerLocks Open	S2	Lw (c)		95.8	99.8	96.8	97.2	98.3	96.4	93.9	90.7	103.0	105.8	Manufacturer
15HP Tech 21 - No PowerLock	S3	Lw (c)		99.8	103.8	100.8	101.2	102.3	100.4	97.9	94.7	107.0	109.8	Manufacturer
Drive Through Intercom	DT	Lw (c)	A				84.5					84.5	87.7	Manufacturer
Single Vacuum Station	V	Lw (c)		70.4	66.1	64.3	66.1	71.2	75.0	77.3	80.4	83.3	83.8	Measurement
Central Vacuum Unit	VC	Lw (c)		72.9	70.7	68.8	67.6	67.8	65.3	61.7	55.1	72.3	77.8	Manufacturer
PECO Wash System	S4	Lw (c)		108.1	112.1	109.1	109.5	110.6	108.7	106.2	103.0	115.3	118.1	Manufacturer

Eilar Associates, Inc.
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Date: 26 Jul 2021

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.35
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			67.7	-80.2	0.0	0.0		x	Total	1.52	r	87.26	87.08	1.52
R2			70.0	-80.2	0.0	0.0		x	Total	1.52	r	124.11	115.80	1.52
R3			71.7	-80.2	0.0	0.0		x	Total	1.52	r	147.93	87.08	1.52
R4			63.9	-80.2	0.0	0.0		x	Total	1.52	r	114.15	32.75	1.52

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
Loader			98.8	98.8	98.8	Lw	C1		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.83	r	124.13	87.04	1.83
Dump Truck			112.0	112.0	112.0	Lw	C2		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.83	r	124.13	87.04	1.83
Excavator			100.6	100.6	100.6	Lw	C3		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.83	r	124.13	87.04	1.83
Lift			101.5	101.5	101.5	Lw	C6		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.83	r	124.13	87.04	1.83

Sound Level Spectra

Name	ID	Type	1/3 Oktave Spectrum (dB)																					
			Weight.	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500
Backhoe Loader (8 t)	C1	Lw (c)						105.0			97.0			95.0			95.0			94.0			91.0	
Dump Truck (25 t)	C2	Lw (c)						121.0			118.0			108.0			110.0			106.0			104.0	
Excavator (14 t)	C3	Lw (c)						105.0			101.0			99.0			98.0			95.0			93.0	
Paver (18 t)	C4	Lw (c)						103.0			108.0			105.0			103.0			102.0			101.0	
Roller (22 t)	C5	Lw (c)						118.0			116.0			106.0			104.0			106.0			104.0	
Scissor Lift (10 t)	C6	Lw (c)						116.0			110.0			100.0			98.0			95.0			93.0	
Trailer Crane (70 t)	C7	Lw (c)						111.0			103.0			102.0			98.0			96.0			93.0	

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Date: 26 Jul 2021

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.35
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			59.0	-80.2	0.0	0.0		x	Total	1.52	r	87.26	87.08	1.52
R2			61.3	-80.2	0.0	0.0		x	Total	1.52	r	124.11	115.80	1.52
R3			63.0	-80.2	0.0	0.0		x	Total	1.52	r	147.93	87.08	1.52
R4			55.2	-80.2	0.0	0.0		x	Total	1.52	r	114.15	32.75	1.52

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m^2)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
Excavator			100.6	100.6	100.6	Lw	C3		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.83	r	124.13	87.04	1.83
Lift			101.5	101.5	101.5	Lw	C6		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.83	r	124.13	87.04	1.83

Sound Level Spectra

Name	ID	Type	1/3 Oktave Spectrum (dB)																					
			Weight.	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500
Backhoe Loader (8 t)	C1	Lw (c)						105.0			97.0			95.0			95.0			94.0			91.0	
Dump Truck (25 t)	C2	Lw (c)						121.0			118.0			108.0			110.0			106.0			104.0	
Excavator (14 t)	C3	Lw (c)						105.0			101.0			99.0			98.0			95.0			93.0	
Paver (18 t)	C4	Lw (c)						103.0			108.0			105.0			103.0			102.0			101.0	
Roller (22 t)	C5	Lw (c)						118.0			116.0			106.0			104.0			106.0			104.0	
Scissor Lift (10 t)	C6	Lw (c)						116.0			110.0			100.0			98.0			95.0			93.0	
Trailer Crane (70 t)	C7	Lw (c)						111.0			103.0			102.0			98.0			96.0			93.0	

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Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.35
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			57.8	-80.2	0.0	0.0		x	Total	1.52	r	87.26	87.08	1.52
R2			60.1	-80.2	0.0	0.0		x	Total	1.52	r	124.11	115.80	1.52
R3			61.9	-80.2	0.0	0.0		x	Total	1.52	r	147.93	87.08	1.52
R4			54.1	-80.2	0.0	0.0		x	Total	1.52	r	114.15	32.75	1.52

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m^2)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
Crane			101.3	101.3	101.3	Lw	C7		0.0	0.0	0.0				9.50	0.00	0.00	0.0		(none)	1.83	r	124.13	87.04	1.83
Lift			101.5	101.5	101.5	Lw	C6		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.83	r	124.13	87.04	1.83

Sound Level Spectra

Name	ID	Type	1/3 Oktave Spectrum (dB)																					
			Weight.	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500
Backhoe Loader (8 t)	C1	Lw (c)						105.0			97.0			95.0			95.0			94.0			91.0	
Dump Truck (25 t)	C2	Lw (c)						121.0			118.0			108.0			110.0			106.0			104.0	
Excavator (14 t)	C3	Lw (c)						105.0			101.0			99.0			98.0			95.0			93.0	
Paver (18 t)	C4	Lw (c)						103.0			108.0			105.0			103.0			102.0			101.0	
Roller (22 t)	C5	Lw (c)						118.0			116.0			106.0			104.0			106.0			104.0	
Scissor Lift (10 t)	C6	Lw (c)						116.0			110.0			100.0			98.0			95.0			93.0	
Trailer Crane (70 t)	C7	Lw (c)						111.0			103.0			102.0			98.0			96.0			93.0	

APPENDIX D: NOISE MEASUREMENT DETAILS

Summary

File Name on Meter	LxT_Data.237
File Name on PC	SLM_0004085_LxT_Data_237.00.ldbin
Serial Number	0004085
Model	SoundExpert® LxT
Firmware Version	2.402
User	MLO
Location	
Job Description	
Note	

Measurement

Description	
Start	2020-03-11 13:06:43
Stop	2020-03-11 13:16:48
Duration	00:10:02.1
Run Time	00:10:02.1
Pause	00:00:00.0
Pre Calibration	2020-03-11 13:04:45
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	122.2 dB

	A	C	Z
Under Range Peak	78.8	75.8	**80.8** dB
Under Range Limit	**24.2**	25.1	31.2 dB
Noise Floor	15.0	16.0	22.0 dB

Results

LAeq	75.2	
LAE	103.0	
EA	2.235	mPa²h
LZpeak (max)	2020-03-11 13:08:55	116.2 dB
LASmax	2020-03-11 13:08:56	95.6 dB
LASmin	2020-03-11 13:15:26	60.3 dB
SEA	-99.94	dB

LAS > 85.0 dB (Exceedance Counts / Duration)	2	9.3 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**	
	75.2	75.2	-99.94	75.2	75.2	-99.94	-99.94	dB

LCeq	83.7 dB
LAeq	75.2 dB
LCeq - LAeq	8.4 dB
LAleq	77.6 dB
LAeq	75.2 dB
LAleq - LAeq	2.3 dB

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	75.2		83.7			
Ls(max)	95.6	2020/03/11 13:08:56				
Ls(min)	60.3	2020/03/11 13:15:26				
LPeak(max)					116.2	2020/03/11 13:08:55

# Overloads	0
Overload Duration	0.0 s
# OBA Overloads	0
OBA Overload Duration	0.0 s

Statistics

LAI5.00	77.5 dB
LAI10.00	75.8 dB
LAI33.30	72.3 dB
LAI50.00	69.7 dB
LAI66.60	67.7 dB
LAI90.00	64.1 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**
Direct	2019-12-23 09:16:56	-28.8	2.8	2.6	6.8	0.1	-0.2	1.9	4.2	-1.6	-1.3	6.7	1.7	5.4	6.9	13.6	5.0	4.2	12.1	8.3	5.8	5.7	7.5	8.2	7.0	7.8	7.4	9.0	10.9	13.4	12.0	40.6	24.1	16.0	17.0	20.4	18.9	20.3
Direct	2018-01-04 03:51:20	-26.4	2.7	1.5	5.5	0.7	2.9	2.6	1.1	0.6	1.6	5.3	4.6	0.7	7.8	15.6	4.1	5.4	12.3	4.6	8.2	5.4	6.8	5.9	7.6	7.6	8.5	8.6	10.0	12.8	12.6	40.3	17.8	15.8	16.5	18.6	18.8	19.9
PRMLxT1L	2020-03-11 13:04:43	-28.5	70.0	75.4	60.5	66.5	61.7	62.0	63.5	62.7	64.5	63.5	65.9	68.7	71.4	71.1	69.0	65.4	64.6	63.2	63.1	59.5	50.5	41.4	114.1	49.3	24.7	65.0	20.4	60.3	22.0	30.5	22.1	23.1	25.3	26.8	29.2	31.2
PRMLxT1L	2020-03-11 10:38:10	-28.6	77.7	92.3	91.9	76.6	64.0	60.7	51.7	58.6	66.8	63.5	65.4	62.3	64.2	62.1	57.8	60.8	61.6	58.7	61.4	59.6	51.2	42.5	114.0	49.1	23.0	64.7	20.6	60.4	21.7	31.7	22.0	22.7	24.7	26.7	29.0	31.5
PRMLxT1L	2020-03-09 08:34:00	-28.6	56.4	60.4	59.9	56.3	57.6	59.1	62.0	64.1	62.4	50.1	42.3	41.4	36.1	33.8	34.5	32.4	30.5	31.2	32.0	29.2	20.6	28.8	114.0	49.0	19.4	64.6	20.9	60.3	22.8	31.8	22.1	22.9	24.9	26.7	29.2	31.7
PRMLxT1L	2020-02-28 14:05:28	-28.6	66.8	66.8	66.4	64.8	68.4	69.9	68.0	67.4	59.2	68.2	59.4	64.0	63.6	63.4	62.2	59.6	55.3	56.7	50.7	46.7	38.1	34.3	114.0	49.2	25.9	64.6	20.2	60.4	22.9	31.8	21.6	22.8	24.7	26.7	29.0	31.1
PRMLxT1L	2020-02-28 14:05:14	-28.6	67.9	64.9	71.5	63.1	60.6	63.8	60.8	58.2	69.4	65.4	65.4	69.6	86.8	83.4	87.2	82.7	76.1	76.4	66.2	70.0	68.7	60.3	114.2	53.4	52.3	65.1	48.8	60.9	48.4	45.4	45.8	42.5	42.1	39.6	39.4	38.2
PRMLxT1L	2020-02-26 08:43:32	-28.9	55.7	53.6	62.8	50.1	49.5	45.7	53.2	53.9	57.9	57.8	63.8	75.8	82.1	65.6	61.6	60.6	79.6	71.0	71.2	76.7	75.8	73.9	113.7	73.1	71.1	71.2	69.9	69.4	68.2	66.6	64.8	62.2	61.2	61.7	61.0	58.0
PRMLxT1L	2020-02-13 15:06:22	-28.6	63.2	57.4	60.2	55.9	54.1	52.4	56.4	57.2	61.4	58.6	56.3	60.3	63.6	60.7	56.8	59.0	55.9	56.2	55.4	52.0	49.8	50.3	114.0	49.3	35.5	64.6	21.5	60.3	22.9	31.0	22.0	23.2	24.8	26.5	29.2	31.2
PRMLxT1L	2020-02-13 13:49:28	-28.6	92.4	92.6	68.7	74.0	71.0	73.5	71.2	78.1	66.1	68.1	65.7	67.6	67.3	60.1	57.6	57.9	57.5	53.2	56.0	54.9	46.7	43.3	114.1	49.7	28.1	64.5	21.1	60.5	22.3	31.4	21.7	23.2	24.5	26.8	28.9	31.3
PRMLxT1L	2020-01-23 15:04:31	-28.6	77.8	79.8	63.7	67.7	73.5	78.1	66.3	64.9	73.5	71.2	70.0	70.5	62.0	59.4	61.5	59.6	64.9	63.9	61.3	60.0	46.2	55.3	113.9	49.7	37.6	64.6	21.9	60.0	27.5	30.6	22.4	23.2	24.9	26.5	28.9	31.1
PRMLxT1L	2020-01-14 16:10:41	-28.6	64.5	59.7	54.5	56.1	59.4	56.6	61.9	61.8	63.9	64.2	63.2	62.2	67.5	61.0	62.7	61.3	59.6	59.6	57.0	55.4	42.1	33.7	113.8	49.0	19.8	64.7	20.7	60.3	20.7	31.9	22.0	22.9	25.1	26.8	29.1	31.0
PRMLxT1L	2020-01-03 10:21:25	-28.4	55.9	48.4	45.7	43.1	38.2	54.1	45.6	47.2	43.3	50.6	44.9	41.3	58.1	52.1	49.6	51.6	77.8	69.4	63.9	72.0	63.8	56.6	114.0	53.4	43.8	66.1	22.1	59.2	29.3	27.3	23.7	25.1	25.1	26.7	28.8	31.0

1/1 Octave

Frequency (Hz)	8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
Overall 1/1 Spectra	69.6	69.3	74.2	79.9	78.4	74.5	73.7	70.8	65.0	58.5	52.5	47.5
Max 1/1 Spectra	84.7	78.8	83.4	95.6	96.7	95.7	95.5	90.4	83.3	77.9	72.9	70.8
Min 1/1 Spectra	52.7	60.8	67.4	65.7	64.2	58.4	55.7	54.0	48.7	42.5	34.5	25.4

1/3 Octave

Frequency (Hz)	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
Overall 1/3 Spectra	66.3	64.5	63.5	63.5	63.2	66.2	69.0	69.2	70.2	72.2	77.8	73.5	73.1	74.7	73.2	70.6	67.6	69.7	70.3	67.4	68.7	67.3	65.9	64.3	62.3	59.6	57.5	55.6	53.2	51.1	49.5	47.8	44.6	45.6	42.2	36.4
Max 1/3 Spectra	79.5	81.0	78.7	75.1	76.0	76.4	78.5	77.1	83.3	90.4	95.4	89.6	88.3	93.5	94.3	91.9	87.9	89.4	91.9	89.7	91.0	87.5	83.8	83.9	80.1	79.1	76.5	74.8	72.7	71.4	69.6	68.4	65.2	69.8	64.7	59.8
Min 1/3 Spectra	44.6	46.2	48.6	49.9	52.5	57.5	61.6	61.3	60.8	60.2	59.3	59.5	57.4	60.1	57.4	53.9	53.1	52.0	50.1	50.0	49.9	50.3	48.6	47.5	45.6	43.4	41.4	39.6	37.0	34.7	32.2	29.1	25.6	21.7	20.1	19.8

1/1 OBA Ref. Spectra

Frequency (Hz)	8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/3 OBA Ref. Spectra

Frequency (Hz)	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/1 OBA Under Range

Frequency (Hz)	8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
Under Range Limit	20.6	17.9	16.1	14.2	12.6	13.3	14.6	16.8	19.4	22.6	25.2	28.5
Noise Floor	16.2	13.6	11.4	9.6	7.9	7.7	8.9	10.8	13.3	16.3	19.0	22.1

1/3 OBA Under Range

Frequency (Hz)	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
Under Range Limit	22.3	21.2	20.6	19.6	18.7	17.9	17.2	16.6	16.1	15.2	14.8	14.2	13.6	13.1	12.6	12.7	12.8	13.3	13.7	14.0	14.6	15.4	15.9	16.8	17.6	18.5	19.4	20.4	21.3	22.6	23.1	24.1	25.2	26.1	27.0	28.5
Noise Floor	12.3	11.2	10.6	9.6	8.7	7.9	7.2	6.6	6.1	5.2	4.8	4.2	3.6	3.1	2.6	2.7	2.8	3.3	3.7	4.0	4.6	5.4	5.9	6.8	7.6	8.5	9.4	10.4	11.3	12.6	13.1	14.1	15.2	16.1	17.0	18.5

Record #	Date	Time	Record Type	Cause	#	TH Record	Sound Record
1	2020-03-11	13:04:45	Calibration Change	Key	0.09 dB	1	
2	2020-03-11	13:06:43	Run	Key	1	2	
3	2020-03-11	13:11:18	Stop	Key	1	31	
4	2020-03-11	13:11:21	Run	Key	2	32	
5	2020-03-11	13:16:48	Stop	Key	2	66	

Statistics		
Level (dB)	**Count**	**Percent**
Under	0	0.00
60.3	19	0.03
60.4	84	0.14
60.5	155	0.26
60.6	220	0.37
60.7	151	0.25
60.8	186	0.31
60.9	24	0.04
61.0	19	0.03
61.1	20	0.03
61.2	90	0.15
61.3	72	0.12
61.4	197	0.33
61.5	331	0.55
61.6	172	0.29
61.7	238	0.40
61.8	71	0.12
61.9	43	0.07
62.0	55	0.09
62.1	169	0.28
62.2	203	0.34
62.3	216	0.36
62.4	202	0.34
62.5	99	0.16
62.6	82	0.14
62.7	121	0.20
62.8	94	0.16
62.9	197	0.33
63.0	184	0.31
63.1	261	0.43
63.2	163	0.27
63.3	147	0.24
63.4	206	0.34
63.5	273	0.45
63.6	240	0.40
63.7	214	0.36
63.8	287	0.48
63.9	215	0.36
64.0	234	0.39
64.1	260	0.43
64.2	289	0.48
64.3	183	0.30
64.4	234	0.39
64.5	356	0.59
64.6	411	0.68
64.7	304	0.50

64.8	411	0.68
64.9	656	1.09
65.0	624	1.04
65.1	463	0.77
65.2	308	0.51
65.3	270	0.45
65.4	323	0.54
65.5	321	0.53
65.6	322	0.53
65.7	286	0.48
65.8	407	0.68
65.9	374	0.62
66.0	284	0.47
66.1	323	0.54
66.2	331	0.55
66.3	253	0.42
66.4	342	0.57
66.5	455	0.76
66.6	396	0.66
66.7	346	0.57
66.8	389	0.65
66.9	471	0.78
67.0	495	0.82
67.1	509	0.85
67.2	623	1.03
67.3	454	0.75
67.4	526	0.87
67.5	501	0.83
67.6	481	0.80
67.7	622	1.03
67.8	643	1.07
67.9	501	0.83
68.0	498	0.83
68.1	475	0.79
68.2	407	0.68
68.3	461	0.77
68.4	444	0.74
68.5	487	0.81
68.6	515	0.86
68.7	564	0.94
68.8	456	0.76
68.9	417	0.69
69.0	432	0.72
69.1	451	0.75
69.2	488	0.81
69.3	469	0.78
69.4	458	0.76
69.5	550	0.91

69.6	567	0.94
69.7	583	0.97
69.8	483	0.80
69.9	377	0.63
70.0	353	0.59
70.1	307	0.51
70.2	343	0.57
70.3	402	0.67
70.4	407	0.68
70.5	379	0.63
70.6	370	0.61
70.7	337	0.56
70.8	321	0.53
70.9	432	0.72
71.0	449	0.75
71.1	511	0.85
71.2	397	0.66
71.3	440	0.73
71.4	427	0.71
71.5	439	0.73
71.6	364	0.60
71.7	371	0.62
71.8	352	0.58
71.9	311	0.52
72.0	279	0.46
72.1	312	0.52
72.2	348	0.58
72.3	319	0.53
72.4	297	0.49
72.5	315	0.52
72.6	287	0.48
72.7	313	0.52
72.8	309	0.51
72.9	497	0.83
73.0	431	0.72
73.1	555	0.92
73.2	512	0.85
73.3	565	0.94
73.4	452	0.75
73.5	361	0.60
73.6	383	0.64
73.7	445	0.74
73.8	552	0.92
73.9	553	0.92
74.0	605	1.00
74.1	658	1.09
74.2	478	0.79
74.3	382	0.63

74.4	452	0.75
74.5	493	0.82
74.6	397	0.66
74.7	456	0.76
74.8	390	0.65
74.9	323	0.54
75.0	354	0.59
75.1	279	0.46
75.2	247	0.41
75.3	225	0.37
75.4	238	0.40
75.5	275	0.46
75.6	327	0.54
75.7	379	0.63
75.8	379	0.63
75.9	412	0.68
76.0	259	0.43
76.1	238	0.40
76.2	221	0.37
76.3	188	0.31
76.4	176	0.29
76.5	144	0.24
76.6	172	0.29
76.7	221	0.37
76.8	122	0.20
76.9	97	0.16
77.0	76	0.13
77.1	118	0.20
77.2	130	0.22
77.3	108	0.18
77.4	69	0.11
77.5	75	0.12
77.6	69	0.11
77.7	107	0.18
77.8	82	0.14
77.9	86	0.14
78.0	71	0.12
78.1	87	0.14
78.2	93	0.15
78.3	98	0.16
78.4	73	0.12
78.5	73	0.12
78.6	52	0.09
78.7	58	0.10
78.8	58	0.10
78.9	66	0.11
79.0	74	0.12
79.1	69	0.11

79.2	44	0.07
79.3	25	0.04
79.4	17	0.03
79.5	24	0.04
79.6	25	0.04
79.7	24	0.04
79.8	23	0.04
79.9	37	0.06
80.0	52	0.09
80.1	15	0.02
80.2	19	0.03
80.3	17	0.03
80.4	17	0.03
80.5	17	0.03
80.6	19	0.03
80.7	20	0.03
80.8	20	0.03
80.9	34	0.06
81.0	46	0.08
81.1	28	0.05
81.2	14	0.02
81.3	16	0.03
81.4	9	0.01
81.5	14	0.02
81.6	7	0.01
81.7	13	0.02
81.8	10	0.02
81.9	10	0.02
82.0	13	0.02
82.1	12	0.02
82.2	15	0.02
82.3	9	0.01
82.4	12	0.02
82.5	8	0.01
82.6	8	0.01
82.7	9	0.01
82.8	8	0.01
82.9	6	0.01
83.0	9	0.01
83.1	7	0.01
83.2	8	0.01
83.3	6	0.01
83.4	7	0.01
83.5	8	0.01
83.6	8	0.01
83.7	7	0.01
83.8	10	0.02
83.9	28	0.05

84.0	24	0.04
84.1	23	0.04
84.2	9	0.01
84.3	8	0.01
84.4	12	0.02
84.5	12	0.02
84.6	9	0.01
84.7	10	0.02
84.8	7	0.01
84.9	8	0.01
85.0	7	0.01
85.1	7	0.01
85.2	10	0.02
85.3	6	0.01
85.4	8	0.01
85.5	8	0.01
85.6	8	0.01
85.7	7	0.01
85.8	7	0.01
85.9	7	0.01
86.0	8	0.01
86.1	8	0.01
86.2	8	0.01
86.3	9	0.01
86.4	6	0.01
86.5	9	0.01
86.6	7	0.01
86.7	9	0.01
86.8	6	0.01
86.9	9	0.01
87.0	7	0.01
87.1	10	0.02
87.2	8	0.01
87.3	10	0.02
87.4	10	0.02
87.5	21	0.03
87.6	10	0.02
87.7	14	0.02
87.8	13	0.02
87.9	18	0.03
88.0	29	0.05
88.1	13	0.02
88.2	19	0.03
88.3	12	0.02
88.4	10	0.02
88.5	13	0.02
88.6	16	0.03
88.7	11	0.02

88.8	22	0.04
88.9	46	0.08
89.0	6	0.01
89.1	5	0.01
89.2	3	0.00
89.3	5	0.01
89.4	2	0.00
89.5	5	0.01
89.6	5	0.01
89.7	4	0.01
89.8	3	0.00
89.9	5	0.01
90.0	3	0.00
90.1	5	0.01
90.2	2	0.00
90.3	4	0.01
90.4	4	0.01
90.5	4	0.01
90.6	5	0.01
90.7	4	0.01
90.8	3	0.00
90.9	5	0.01
91.0	3	0.00
91.1	5	0.01
91.2	3	0.00
91.3	5	0.01
91.4	3	0.00
91.5	5	0.01
91.6	2	0.00
91.7	5	0.01
91.8	3	0.00
91.9	3	0.00
92.0	4	0.01
92.1	3	0.00
92.2	3	0.00
92.3	4	0.01
92.4	3	0.00
92.5	4	0.01
92.6	3	0.00
92.7	3	0.00
92.8	4	0.01
92.9	3	0.00
93.0	4	0.01
93.1	4	0.01
93.2	4	0.01
93.3	4	0.01
93.4	5	0.01
93.5	3	0.00

93.6	5	0.01
93.7	4	0.01
93.8	4	0.01
93.9	4	0.01
94.0	10	0.02
94.1	12	0.02
94.2	11	0.02
94.3	12	0.02
94.4	6	0.01
94.5	6	0.01
94.6	7	0.01
94.7	6	0.01
94.8	5	0.01
94.9	7	0.01
95.0	7	0.01
95.1	10	0.02
95.2	11	0.02
95.3	7	0.01
95.4	14	0.02
95.5	13	0.02
95.6	11	0.02
Over	0	0.00
Total Count	60210	

Record #	Date	Time	Run Duration	Run Time	Pause	LAeq	LAE	LASmin	LASmin Time	LASmax	LASmax Time	LZpeak (max)	LZpeak (max) Time	SPL 1 Count	SPL 1 Duration	SPL 2 Count	SPL 2 Duration	Peak 1 Count	Peak 1 Duration
1	2020-03-11	13:06:43	00:04:35.6	00:04:35.6	00:00:00.0	77.3	101.7	62.1	13:10:07	95.6	13:08:56	116.2	13:08:55	2	9.3	0	0.0	0	0.0
2	2020-03-11	13:11:21	00:05:26.5	00:05:26.5	00:00:00.0	72.0	97.1	60.3	13:15:26	81.1	13:11:24	103.9	13:14:38	0	0.0	0	0.0	0	0.0

Peak 2 Count	Peak 2 Duration	Peak 3 Count	Peak 3 Duration	LAS5.00	LAS10.00	LAS33.30	LAS50.00	LAS66.60	LAS90.00	SEA	LCeq	LAeq	LCeq - LAeq	LAIeq	LAeq	LAIeq - LAeq	# Overloads	Overloads Duration	# OBA Overloads	OBA Overloads Duration
0	0.0	0	0.0	80.3	75.7	72.4	70.2	68.0	64.9	-99.9	84.6	77.3	7.3	79.8	77.3	2.5	0	0.0	0	0.0
0	0.0	0	0.0	77.0	75.8	72.2	69.4	67.4	63.3	-99.9	82.6	72.0	10.7	73.7	72.0	1.7	0	0.0	0	0.0

1/1 LZeq 8.0	1/1 LZeq 16.0	1/1 LZeq 31.5	1/1 LZeq 63.0	1/1 LZeq 125	1/1 LZeq 250	1/1 LZeq 500	1/1 LZeq 1000	1/1 LZeq 2000	1/1 LZeq 4000	1/1 LZeq 8000	1/1 LZeq 16000	1/1 LZSmax 8.0	1/1 LZSmax 16.0	1/1 LZSmax 31.5	1/1 LZSmax 63.0	1/1 LZSmax 125
67.8	69.2	73.4	79.8	79.3	76.8	76.4	72.7	66.6	60.2	54.3	49.8	81.9	78.8	81.4	92.4	96.7
70.7	69.3	74.8	80.0	77.5	70.9	67.5	68.2	63.1	56.2	50.0	43.6	84.7	77.2	83.4	95.6	89.2

1/1 LZSmax 250	1/1 LZSmax 500	1/1 LZSmax 1000	1/1 LZSmax 2000	1/1 LZSmax 4000	1/1 LZSmax 8000	1/1 LZSmax 16000	1/1 LZSmin 8.0	1/1 LZSmin 16.0	1/1 LZSmin 31.5	1/1 LZSmin 63.0	1/1 LZSmin 125	1/1 LZSmin 250	1/1 LZSmin 500	1/1 LZSmin 1000
95.7	95.5	90.4	83.3	77.9	72.9	70.8	52.7	60.8	67.4	65.7	66.1	60.2	56.3	54.6
84.9	78.4	76.7	74.5	66.6	61.9	62.7	52.8	61.0	67.8	70.1	64.2	58.4	55.7	54.0

1/1 LZSmin 2000	1/1 LZSmin 4000	1/1 LZSmin 8000	1/1 LZSmin 16000	1/3 LZeq 6.3	1/3 LZeq 8.0	1/3 LZeq 10.0	1/3 LZeq 12.5	1/3 LZeq 16.0	1/3 LZeq 20.0	1/3 LZeq 25.0	1/3 LZeq 31.5	1/3 LZeq 40.0	1/3 LZeq 50.0	1/3 LZeq 63.0	1/3 LZeq 80.0	1/3 LZeq 100
50.7	44.8	37.9	27.3	64.4	62.4	62.0	62.4	63.7	66.3	69.6	67.8	68.4	72.3	78.3	70.5	72.5
48.7	42.5	34.5	25.4	67.4	65.8	64.4	64.3	62.8	66.0	68.5	70.1	71.3	72.2	77.3	75.0	73.6

1/3 LZeq 125	1/3 LZeq 160	1/3 LZeq 200	1/3 LZeq 250	1/3 LZeq 315	1/3 LZeq 400	1/3 LZeq 500	1/3 LZeq 630	1/3 LZeq 800	1/3 LZeq 1000	1/3 LZeq 1250	1/3 LZeq 1600	1/3 LZeq 2000	1/3 LZeq 2500	1/3 LZeq 3150	1/3 LZeq 4000	1/3 LZeq 5000	1/3 LZeq 6300
75.7	75.0	72.9	69.3	71.9	73.1	69.9	71.5	69.5	67.3	65.9	63.6	61.3	59.1	57.3	54.9	53.1	51.3
73.6	70.6	66.7	65.4	66.0	63.3	62.5	62.2	63.5	64.2	62.4	60.7	57.4	55.3	53.5	51.0	48.3	47.2

1/3 LZeq 8000	1/3 LZeq 10000	1/3 LZeq 12500	1/3 LZeq 16000	1/3 LZeq 20000	1/3 LZSmax 6.3	1/3 LZSmax 8.0	1/3 LZSmax 10.0	1/3 LZSmax 12.5	1/3 LZSmax 16.0	1/3 LZSmax 20.0	1/3 LZSmax 25.0	1/3 LZSmax 31.5	1/3 LZSmax 40.0	1/3 LZSmax 50.0
49.5	46.7	48.4	43.9	34.5	79.5	77.1	76.9	71.3	76.0	76.4	78.5	77.1	81.7	90.4
45.5	41.4	38.8	39.8	37.5	78.2	81.0	78.7	75.1	71.9	76.3	73.7	75.8	83.3	84.5

1/3 LZSmax 63.0	1/3 LZSmax 80.0	1/3 LZSmax 100	1/3 LZSmax 125	1/3 LZSmax 160	1/3 LZSmax 200	1/3 LZSmax 250	1/3 LZSmax 315	1/3 LZSmax 400	1/3 LZSmax 500	1/3 LZSmax 630	1/3 LZSmax 800	1/3 LZSmax 1000	1/3 LZSmax 1250	1/3 LZSmax 1600
87.8	81.4	88.3	93.5	94.3	91.9	87.9	89.4	91.9	89.7	91.0	87.5	83.8	83.9	80.1
95.4	89.6	87.9	86.4	84.8	78.4	79.8	84.6	77.3	74.2	70.0	72.7	73.0	71.6	73.4

1/3 LZSmax 2000	1/3 LZSmax 2500	1/3 LZSmax 3150	1/3 LZSmax 4000	1/3 LZSmax 5000	1/3 LZSmax 6300	1/3 LZSmax 8000	1/3 LZSmax 10000	1/3 LZSmax 12500	1/3 LZSmax 16000	1/3 LZSmax 20000	1/3 LZSmin 6.3	1/3 LZSmin 8.0	1/3 LZSmin 10.0	1/3 LZSmin 12.5
79.1	76.5	74.8	72.7	71.4	69.6	68.4	65.2	69.8	64.7	54.4	44.6	46.2	48.6	49.9
68.2	67.0	65.7	61.7	59.0	58.9	57.3	54.4	50.9	59.9	59.8	47.2	47.1	49.1	52.5

1/3 LZSmin 16.0	1/3 LZSmin 20.0	1/3 LZSmin 25.0	1/3 LZSmin 31.5	1/3 LZSmin 40.0	1/3 LZSmin 50.0	1/3 LZSmin 63.0	1/3 LZSmin 80.0	1/3 LZSmin 100	1/3 LZSmin 125	1/3 LZSmin 160	1/3 LZSmin 200	1/3 LZSmin 250	1/3 LZSmin 315	1/3 LZSmin 400
52.5	57.5	61.6	61.3	60.8	60.2	59.3	59.5	60.9	60.1	58.6	55.8	53.1	52.0	51.9
52.5	57.6	61.6	62.0	61.0	62.2	65.4	62.5	57.4	60.3	57.4	53.9	53.3	52.3	50.1

1/3 LZSmin 500	1/3 LZSmin 630	1/3 LZSmin 800	1/3 LZSmin 1000	1/3 LZSmin 1250	1/3 LZSmin 1600	1/3 LZSmin 2000	1/3 LZSmin 2500	1/3 LZSmin 3150	1/3 LZSmin 4000	1/3 LZSmin 5000	1/3 LZSmin 6300	1/3 LZSmin 8000	1/3 LZSmin 10000	1/3 LZSmin 12500
51.1	49.9	50.6	49.5	49.3	46.8	45.5	44.4	42.2	39.1	36.8	34.8	32.9	28.7	25.0
50.0	50.6	50.3	48.6	47.5	45.6	43.4	41.4	39.6	37.0	34.7	32.2	29.1	25.6	21.7

1/3 LZSmin 16000	1/3 LZSmin 20000
21.0	20.0
20.1	19.8

Record #	Record Type	Date	Time	LAeq	LZpeak	LASmax	OVLD	Marker
1	alibration Chang	2020-03-11	13:04:45					
2	Run	2020-03-11	13:06:43					
3		2020-03-11	13:06:43	68.4	90.2	70.3	No	
4		2020-03-11	13:06:50	70.2	93.0	72.1	No	
5		2020-03-11	13:07:00	66.2	98.1	68.5	No	
6		2020-03-11	13:07:10	70.8	94.0	72.4	No	
7		2020-03-11	13:07:20	75.3	97.1	78.6	No	
8		2020-03-11	13:07:30	72.6	99.7	75.0	No	
9		2020-03-11	13:07:40	74.2	98.5	76.4	No	
10		2020-03-11	13:07:50	72.3	96.3	75.3	No	
11		2020-03-11	13:08:00	72.3	96.2	76.5	No	
12		2020-03-11	13:08:10	84.5	105.8	89.0	No	
13		2020-03-11	13:08:20	67.9	93.5	75.2	No	
14		2020-03-11	13:08:30	67.7	91.8	70.8	No	
15		2020-03-11	13:08:40	67.9	90.9	71.1	No	
16		2020-03-11	13:08:50	89.4	116.2	95.6	No	
17		2020-03-11	13:09:00	72.0	96.8	82.2	No	
18		2020-03-11	13:09:10	75.1	100.2	76.8	No	
19		2020-03-11	13:09:20	74.2	101.3	75.9	No	
20		2020-03-11	13:09:30	67.6	97.1	73.8	No	
21		2020-03-11	13:09:40	68.1	94.9	71.7	No	
22		2020-03-11	13:09:50	66.7	99.7	69.6	No	
23		2020-03-11	13:10:00	62.7	97.7	64.6	No	
24		2020-03-11	13:10:10	66.2	95.5	69.8	No	
25		2020-03-11	13:10:20	67.7	99.2	72.9	No	
26		2020-03-11	13:10:30	69.1	97.0	73.1	No	
27		2020-03-11	13:10:40	72.6	100.6	77.3	No	
28		2020-03-11	13:10:50	73.7	95.5	76.8	No	
29		2020-03-11	13:11:00	69.3	94.2	73.2	No	
30		2020-03-11	13:11:10	71.2	98.9	74.0	No	
31	Stop	2020-03-11	13:11:18					
32	Run	2020-03-11	13:11:21					
33		2020-03-11	13:11:21	76.4	103.6	81.1	No	
34		2020-03-11	13:11:30	69.7	97.1	73.4	No	
35		2020-03-11	13:11:40	65.4	98.8	69.2	No	
36		2020-03-11	13:11:50	66.4	92.5	69.8	No	
37		2020-03-11	13:12:00	73.8	98.9	79.6	No	
38		2020-03-11	13:12:10	70.4	100.2	71.8	No	
39		2020-03-11	13:12:20	75.7	99.3	78.4	No	
40		2020-03-11	13:12:30	76.1	99.6	79.2	No	
41		2020-03-11	13:12:40	73.7	95.9	76.8	No	
42		2020-03-11	13:12:50	69.5	97.5	73.9	No	
43		2020-03-11	13:13:00	69.2	94.6	71.5	No	
44		2020-03-11	13:13:10	68.6	94.9	73.4	No	
45		2020-03-11	13:13:20	61.5	96.2	62.6	No	
46		2020-03-11	13:13:30	67.0	94.1	69.6	No	
47		2020-03-11	13:13:40	72.7	97.7	76.0	No	

48		2020-03-11	13:13:50	66.4	92.3	68.7	No
49		2020-03-11	13:14:00	76.8	103.2	80.0	No
50		2020-03-11	13:14:10	74.5	98.6	76.8	No
51		2020-03-11	13:14:20	72.8	94.9	75.8	No
52		2020-03-11	13:14:30	70.9	103.9	75.7	No
53		2020-03-11	13:14:40	73.7	101.4	76.1	No
54		2020-03-11	13:14:50	69.8	94.8	71.9	No
55		2020-03-11	13:15:00	68.2	96.8	71.7	No
56		2020-03-11	13:15:10	62.5	97.0	65.0	No
57		2020-03-11	13:15:20	63.8	102.6	68.5	No
58		2020-03-11	13:15:30	68.0	98.1	71.5	No
59		2020-03-11	13:15:40	75.1	101.5	79.1	No
60		2020-03-11	13:15:50	74.6	102.1	76.3	No
61		2020-03-11	13:16:00	74.7	100.8	79.0	No
62		2020-03-11	13:16:10	69.5	93.0	73.5	No
63		2020-03-11	13:16:20	68.7	94.8	70.6	No
64		2020-03-11	13:16:30	67.3	92.6	71.0	No
65		2020-03-11	13:16:40	64.8	89.1	67.5	No
66	Stop	2020-03-11	13:16:48				

Number	757
Start Date	12/22/2020
Start Time	12:28:00 AM
End Time	12:29:00 AM
Duration	00:01:00
Meas Mode	Auto
Input Range	Low
Input Type	Mic
SPL Time Weight	Slow
LN% Freq Weight	dBA
Overload	No
UnderRange	No
Sensitivity	17.82mV/Pa

LZeq	68.4
LCeq	65.7
LAeq	53.1
LZSmax	70.7
LCSmax	68.5
LASmax	59.8
LZSmin	66.7
LCSmin	63.8
LASmin	46.1
LZE	86.2
LCE	83.5
LAE	70.9
LZpeak	82.5
LCpeak	79.9
LApeak	76.0
1%	59.6
2%	59.5
5%	58.2
8%	57.8
10%	57.2
25%	53.8
50%	50.3
90%	47.4
95%	46.4
99%	46.2

1/1 Octave	dBZ
31.5	62.5
63	63.5
125	55.8
250	52.1
500	48.4
1000	49.9
2000	45.1
4000	34.5
8000	27.0

Number	Start Date	Start Time	End Time	Duration	Meas Mod	Input Rang	Input Type	SPL Time W	LN% Freq W	Overload	UnderRang	Sensitivity	LZeq	LCeq	LAeq	LZmax	LCmax	LAmax	LZmin	LCmin	LAmin	LZE	LCE	LAE	LZpeak	LCpeak	LApeak	1%	2%	5%	8%	10%	25%	50%	90%	95%	99%	1/1 Oct.	31.5	63	125	250	500	1000	2000	4000	8000
1	12/21/2020	11:52:04 AM	11:53:00 AM	0:00:56	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76	73.4	66.8	80.7	78.4	74.6	72.5	70	57	93.5	90.9	84.3	106.1	104.8	105.7	73.4	73	71.7	70.9	70.4	67.5	65.3	59.9	58.1	57.3		70	69.4	65.7	61	59.6	59.9	61.3	59.4	55.2
2	12/21/2020	11:53:00 AM	11:54:00 AM	0:01:00	Auto	Low	Mic	Slow	dBA	Yes	No	17.82mV/Pa	81.8	81.3	78.5	92.1	92	90.5	73.6	70.7	60.4	99.6	99.1	96.3	113.1	111.4	113.4	88.8	87.1	84.1	81.8	81.4	78.7	76.2	64.4	63.3	61.1		70.7	68.3	70.4	71.9	77.8	74.9	67.5	63.7	61
3	12/21/2020	11:54:00 AM	11:55:00 AM	0:01:00	Auto	Low	Mic	Slow	dBA	Yes	No	17.82mV/Pa	75.9	73.5	70.7	83.4	80.2	80.2	71.2	68.9	55.1	93.7	91.3	88.5	110.7	109.3	110.7	78.1	76.6	75.4	74.9	74.5	72.3	68.6	60.2	59.2	55.7		70.7	67.3	62.4	59.7	61.4	63	62.4	66.4	61.7
4	12/21/2020	11:55:00 AM	11:56:00 AM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.7	72.4	63	78.6	77.8	72	71.2	68.8	53.1	92.5	90.2	80.8	93.5	91.1	87.3	71.2	69.7	67.9	67.3	66.9	63.9	59.7	56.1	53.8	53.2		72	67.5	64.3	59.7	56.7	59.5	55.7	52.6	46.1
5	12/21/2020	11:56:00 AM	11:57:00 AM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.7	76.5	71	86.7	86.6	83.5	73.7	70.9	58.3	95.5	94.3	88.8	98.1	98.2	96	82.7	82.1	79.9	77.2	73.1	65.6	61.7	59.6	58.9	58.4		72.8	71.5	66.1	69.4	65.2	68.2	62	57.5	47.7
6	12/21/2020	11:57:00 AM	11:58:00 AM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.8	76.5	70	85.8	85.3	78.1	73.5	71.3	58.2	95.6	94.3	87.8	98	97.6	93.9	77.5	77.2	76	74.7	74.4	71	67.6	61.4	61.1	59		72.4	72.9	68	67.1	65.4	66.2	64	53.8	48
7	12/21/2020	11:58:00 AM	11:59:00 AM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.2	73.1	64.8	77.8	76.5	73.9	73.4	70.8	56.8	93	90.9	82.6	93.8	92.7	92.1	73.1	72.5	70.8	69	68.6	64.1	60.8	57	56.9	56.8		72.1	68.8	64.1	58.1	59	61.8	58.4	48.8	42.4
8	12/21/2020	11:59:00 AM	12:00:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.2	76.2	72.5	82.9	82.6	79.7	72	69.7	55.5	95	94	90.3	94.4	94.4	92.3	79.2	78.6	77.8	77.1	76.9	74.8	69	60.6	58.6	56.6		71.2	66.8	59.6	71.5	66.5	69.7	63.2	59.7	45.9
9	12/21/2020	12:00:00 PM	12:01:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.6	74.4	65.7	80.3	79.7	71	70.8	68.5	52	93.4	92.2	83.5	92.1	92.4	82.9	70.8	70.7	70.5	70.3	70.2	69.5	58.7	53.8	53.4	52.1		70.1	68.3	65.8	70	63.6	59.1	56.6	51	43.2
10	12/21/2020	12:01:00 PM	12:02:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	78.3	77.6	68.5	82.8	81.9	72	71.9	70.2	55.1	96.1	95.4	86.3	93.6	93	84.7	71.8	71.8	71.6	71.4	71.3	70.8	69.7	59.2	57.2	55.2		70.7	72.1	69.2	73.8	65.8	61.5	58.2	52.3	43.4
11	12/21/2020	12:02:00 PM	12:03:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.8	75	66.5	79.3	78.7	70	69.5	67.1	53.2	93.6	92.8	84.3	91.5	90.9	84.3	69.9	69.8	69.7	69.6	69.5	69.1	65.3	56.5	55	53.8		69.1	69	67.8	70.3	63.9	60.6	57.5	51.3	42.8
12	12/21/2020	12:03:00 PM	12:04:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	78.9	77.8	67.4	83	81.8	69.9	70.3	68.1	56.5	96.7	95.6	85.2	96	94	83.2	69.8	69.8	69.7	69.7	69.6	69.1	67.8	59.9	58.6	57.5		74.4	73.3	69	71.4	66	61.3	57.2	51.2	42.6
13	12/21/2020	12:04:00 PM	12:05:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.7	74.1	59.6	83.1	81.7	67	69.6	67.6	54.3	93.5	91.9	77.4	94.6	93.2	83.5	66.9	66.3	64	63.1	62.3	60	58.4	55.2	54.7	54.4		72.9	70.6	66.1	59.7	57.1	54.4	51	42	32.1
14	12/21/2020	12:05:00 PM	12:06:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.3	70.8	61.5	75.1	74.4	66.8	69.2	67.4	55	90.1	88.6	79.3	91.1	89.9	84	66.2	65.7	64.8	64.6	64.3	62.1	60.3	56.8	55.5	55.1		67.6	65.6	64.7	61.6	60.6	56.3	51.4	43.6	33.7
15	12/21/2020	12:06:00 PM	12:07:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.7	73.5	64.8	78.5	77.6	70.3	69.8	67.1	54.8	92.5	91.3	82.6	89.6	88.7	83.9	70.1	69.9	69.3	68.6	68.2	66.7	63.1	56.4	55.1	54.9		68.1	69.1	67.3	65.9	63.8	59.8	53.2	48.5	39.1
16	12/21/2020	12:07:00 PM	12:08:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.5	69.9	56.4	76.7	76.1	62.7	67.8	65.6	50.6	89.3	87.7	74.2	87	86.6	77.9	61.8	60.5	59.8	59.4	59.1	57.8	55.4	51.8	51.4	50.7		66.7	66.6	64.9	56.1	53.1	52.1	46.2	38.1	30.4
17	12/21/2020	12:08:00 PM	12:09:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73	71.4	60.1	76.5	75.2	64	68.2	66.4	54.5	90.8	89.2	77.9	87.2	86.6	77.8	63.6	63.2	62.4	62.1	62	61.4	60	56	55.2	54.8		68.3	68.8	63.8	59	57.2	56.7	49.9	44.1	34
18	12/21/2020	12:09:00 PM	12:10:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.1	71.8	57.1	81	80.2	61.6	68.7	66.8	51.5	90.9	89.6	74.9	90.1	89.7	75	61.4	61.2	60.3	59.5	59.3	57.9	56.7	53.5	52.4	51.6		66.9	70.4	64.3	57.9	53.9	53	45.7	37.8	29.9
19	12/21/2020	12:10:00 PM	12:11:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.8	74	60.6	84.8	84.5	69.2	68.9	67.1	51.2	92.6	91.8	78.4	96	96.4	85.8	69	68.5	67.2	64.7	63.7	60.8	58.5	53.3	52.3	51.4		66.8	68.2	72.2	58.8	56	55.5	48.8	40.1	31.9
20	12/21/2020	12:11:00 PM	12:12:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73	71.5	57.3	79.7	78.1	63.8	68	65.8	48.7	90.8	89.3	75.1	90.5	88.4	79.7	63.4	63.2	62.3	62.1	61.8	59	53.1	49.6	49.1	48.8		67.1	70.1	62.8	57.9	55.1	52.8	45.7	38.5	31.9
21	12/21/2020	12:12:00 PM	12:13:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	78.3	77.2	59.7	87.3	86.6	65.7	68.7	66.5	50.4	96.1	95	77.5	95.5	94.3	79.6	65.4	65.2	64.9	64.4	63.9	62.4	56.6	51.6	51.1	50.5		69.1	77	67.8	58.3	56.1	55.1	48.6	42.9	36.3
22	12/21/2020	12:13:00 PM	12:14:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.4	72.2	57.7	77.5	76.5	63.5	69.2	67.4	51	91.2	90	75.5	90	89	77.7	63.1	62.4	61.2	60.8	60.7	59	56.4	52.8	52	51.3		67	70.2	66.5	58	53.9	53.6	46.6	38.8	30.5
23	12/21/2020	12:14:00 PM	12:15:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.1	75.6	70.3	88.5	88.4	84.7	67.4	65	50.7	93.9	93.4	88.1	104.8	104.8	102.2	84.2	82.7	70.5	63.9	62.6	58.7	56.7	53.6	52.2	50.9		66.7	66.9	66.3	71.5	68.8	66.1	56.3	44.3	36.2
24	12/21/2020	12:15:00 PM	12:16:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.8	73.8	64.3	87.9	87.8	84.1	68.8	67.1	54.1	92.6	91.6	82.1	98.7	98.8	91.1	82.6	80.7	74.6	67	64.3	61.5	59.9	56	55.2	54.2		69	68.2	68.2	67	64.1	58.3	49.5	39.8	30.5
25	12/21/2020	12:16:00 PM	12:17:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.8	73.5	59.5	79.6	78.6	66.5	71.1	69	53.5	92.6	91.3	77.3	90.3	89.9	82.4	65.8	64.3	63.2	62.7	62.1	60.6	58.6	55.2	54.6	53.9		70.8	70.4	66.9	60.8	56.9	55.1	47.3	36.9	29
26	12/21/2020	12:17:00 PM	12:18:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.1	73	62	83	82.7	72.3	67.8	65.5	51.7	91.9	90.8	79.8	94.7	94.5	85.4	72	71.8	68.2	65.7	64.9	58.4	57	53.1	52.8	51.9		68.7	66.5	69.5	64.3	61.3	55.9	46.8	34.8	27.6
27	12/21/2020	12:18:00 PM	12:19:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.5	74.6	61.3	85	84.6	72.1	71.3	69.6	53.7	93.3	92.4	79.1	93.2	93.2	84.7	71.5	71.4	67.6	64.1	63.2	61.1	60.1	55.2	54.6	53.8		67.6	71.4	70.7	63.1	60	55.3	47.5	37.5	28.9
28	12/21/2020	12:19:00 PM	12:20:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.2	70.4	55.4	77.5	76.2	60.8	68	65.6	47.7	90	88.2	73.2	86.4	85.8	76.1	60.5	60.3	59.8	58.6	58.1	56.4	55.1	51.1	49.6	48		67.6	68.6	62.8	55.9	51.5	51.7	44.4	35.7	27.9
29	12/21/2020	12:20:00 PM	12:21:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.3	69.6	58.4	74.1	72.8	62.3	67.5	65.1	50.2	89.1	87.4	76.2	85.9	85.3	77.9	61.8	61.5	60.9	60.7	60.6	59.9	57.8	54.3	52.9	50.7		67.1	66.6	61.7	58.3	54.7	55.5	47.9	37	29.6
30	12/21/2020	12:21:00 PM	12:22:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.4	72.1	60.7	80.2	79.8	73.2	70.4	68.3	53.2	91.2	89.9	78.5	94	93.7	86.5	72.4	70.6	65.8	63.7	62.6	59.4	56.4	54	53.8	53.3		66.9	69.5	65.4	63.1	59.8	54.9	47	37.7	29.6
31	12/21/2020	12:22:00 PM	12:23:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75	74.1	61.2	83.4	83.1	71.7	70.3	68.5	54.7	92.8	91.9	79	94.9	94.2	85.7	71.1	70.2	68.7	65.2	62.8	60.3	58.3	55.6	55.3	54.9		67.7	71.3	68.5	65.1	59.3	54.8	47.3	37.5	31.7
32	12/21/2020	12:23:00 PM	12:24:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.1	72.5	60.3	81.2	79.5	69.8	69.6	67.6	53.6	91.9	90.3	78.1	89.6	89.8	85.9	69.1	68.4	64	62.2	62	60.8	58.7	55.9	55	53.9		71.1	69.1	61.7	62.2	59.1	55.7	48.4	37.8	31.8
33	12/21/2020	12:24:00 PM	12:25:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.1	72.5	60.9	80.5	79.8	72.3	69.5	67.5	52.1	91.9	90.3	78.7	92.1	91.2	84.7	71.9	71	67.3	66.1	65.3	58.2	56.4	53.8	53.2	52.4		70.6	69.1	63.7	62.2	60.7	55.4	47.9	39.9	34.2
34	12/21/2020	12:25:00 PM	12:26:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	70.2	68.1	59.5	76.7	73.1	68.4	66.1	63.4	48.7	88	85.9	77.3	92.6	89.9	87.9	67.8	67.3	65.7	63.3	62.2	59.9	57.6	50.4	49.3	48.7		66.6	64.1	58.9	56.6	54.6	56.2	51.6	46.8	45.4
35	12/21/2020	12:26:00 PM	12:27:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.4	70.9	60.1	77.1	76.2	65.8	67.9	65.5	53.2	90.2	88.7	77.9	88.1	88.5	81.6	65.4	65.2	64.4	63.9	63.6	61.2	58.4	54.3	53.8	53.4		66.8	67.8	65.1	59.3	58.2	56.1	49.1	41.1	31.6
36	12/21/2020	12:27:00 PM	12:28:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.8	70.1	59.8	79.3	76	67.9	67.9	66.4	51.9	89.6	87.9	77.6	93.1	90.4	89.1	67.4	66.8	65.3	63.3	62.6	60.1	58.3	54.7	53.3	52.2		66.4	64.1	65.9	61.2	57.3	55.2	49.3	43.7	38.8
37	12/21/2020	12:28:00 PM	12:29:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.9	74.1	62.1	86.1	85.9	71.9	67.9	65.7	50.6	92.7	91.9	79.9	95.5	95.4	84.4	71.8	71	68.3	64.2	63.5	62.4	61.1	52.4	51.8	50.7		67.5	66.6	72.4	61.1	57.7	57.7	50.1	44.5	38.8
38	12/21/2020	12:29:00 PM	12:30:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	69.9	67.8	55.8	72.7	71.2	58.6	68.1	66	53.2	87.7	85.6	73.6	83.7	82.5	76.4	58	57.8	57.5	57.2	57.1	56.3	55.7	54.3	54	53.3		66.6	63.7	60.7	55.7	53	52.1	45.5	38.9	32
39	12/21/2020	12:30:00 PM	12:31:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72	70.4	57.3	74.9	73.3	61.2	69	67.2	52.8	89.8	88.2	75.1	85.2	84.8	75.1	61	60.9	60.6	60.4	60.2	58.4	56.8	53.5	53.3	52.9		67.6	67.6	63.6	58.2	54.2	53.8	46	34.9	27.1
40	12/21/2020	12:31:00 PM	12:32:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74	72.3	58.8	79.5	78.3	67.5	71	68.7	51.3	91.8	90.1	76.6	90.9	89.3	81.3	67.4	66.8	65.1	63.3	62.9	57.4	54.9	53	52.5	51.5		70.2	69.7	64.2	57.9	57.1	54.6	48.2	40.6	30.7
41	12/21/2020	12:32:00 PM	12:33:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72	70.5	56.9	80.2	79.3	62.1	65.9	63.6	47.2	89.8	88.3	74.7	91.5	90.5	75.5	61.8	61.5	61.3	61.1	61	58.6	55.6	49.8	49.3	47.5		66.8	68.8	62.6	56.3	54.2	52.9	46.1	37.4	29
42	12/21/2020	12:33:00 PM	12:34:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	70.1	68.3	56.8	75.4	74.1	63.6	66.3	63.7	48	87.9	86.1	74.6	86.9	84	78.5	62.9	62.5	61.9	61.2	60.6	58.3	54.7	49.9	48.9	48.1		65.4	65.9	60.5	55.6	53.3	54.1	45.6	35.9	29
43	12/21/2020	12:34:00 PM	12:35:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	69.8	68	56.3	72.9	71.5	60.5	66.8	64.4	51.2	87.6	85.8	74.1	83.9	82.6	75.1	60.1	60	59.3	59	58.9	57.6	55.5	52.4	51.8	51.4		65.9	64.6	60.9	55.6	54.4	52.5	44.9	36.1	30.1
44	12/21/2020	12:35:00 PM	12:36:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.8	70.1	58.4	77.4	75.2	62.3	67.9	65.5	50.4	89.6	87.9	76.2	88.5	86.8	76.7	62.2	62.1	61.8	61.7	61.5	60.6	57.5	51.4	50.8	50.5		66.7	67.5	63.4	56.9	54.7	55.4	47.9	37.5	29.4
45	12/21/2020	12:36:00 PM	12:37:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.2	71.9	61.8	80	79.8	75.2	68.3	66	50.7	91	89.7	79.6	94	94.4	90	74.3	72.7	67.5	62.8	62.1	61.1	56.3	52.2	51.4	50.9		67.1	69.3	64.9	61	61.2	57.5	48.4	38.7	29.2
46	12/21/2020	12:37:00 PM	12:38:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	70.4	68.5	56.4	74.3	73.2	62.2	66.3	64.3	50	88.2	86.3	74.2	86.6	85.3	75.3	61.9	61.7	61.2	60.6	60.4	57.6	55.2	50.9	50.6	50.1		65.5	65.7	61.4	55.7	53	53.2	45.9	35.8	27.6
47	12/21/2020	12:38:00 PM	12:39:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	70.7	69.3	58.6	74.6	73.9	63.2	66	63.9	48.2	88.5	87.1	76.4	85.5	85.1	78	62.9	62.8	62	61.9	61.6	60.6	57.7	50.9	49.3	48.5		64.9	66.1	63.6	58.1	54.9	55.6	48.6	38.1	28.5
48	12/21/2020	12:39:00 PM	12:40:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.8	73.4	56.7	84.8	83.6	62.3	69	67.4	51.7	92.6	91.2	74.5	92.8	92	76.5	62.1	61.9	61.5	60.7	59.5	57.8	55.3	52.7	52.2	51.9		69.1	72.5	64.6	58.1	52.8	52.1	45	37	30
49	12/21/2020	12:40:00 PM	12:41:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.3	70.6	58.2	75.9	73.6	63.4	67.2	65.1	51.9	90.1	88.4	76	87.7	84.9	77.4	62.9	62.2	61.6	61.4	61.2	59.7	57	53.2	52.8	52		67.8	67.9	63.3	57.6	55.7	54.7	47.4	38.4	30.2
50	12/21/2020	12:41:00 PM	12:42:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.9	73.9	61	82.4	82.2	70.6	68.7	66.6	50.1	92.7	91.7	78.8	94.3	93.7	87.7	70.1	69.1	67.6	66.6	65.9	60.6	56.6	52.4	51.3	50.4		68.1	69.3	70.6	64.6	57.1	55.2	47.8	39	31.6
51	12/21/2020	12:42:00 PM	12:43:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.2	72.1	58.9	81.4	81	64.5	68.2	65.8	50.6	91	89.9	76.7	90.7	90.1	76.9	64	63.5	62.3	61.8	61.7	60.6	58.1	52.1	51.6	50.7		66.5	67.5	69.2	59.6	54.4	54.6	47	37	28.1
52	12/21/2020	12:43:00 PM	12:44:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.5	73.5	60.1	83.4	82.6	65	68.8	66.7	52.1	92.3	91.3	77.9	95.2	94.5	79.6	64	63.7	63.1	62.7	62.5	61.5	60.1	54.6	53.2	52.2		66.7	71.5	68.1	61.2	56.8	56.1	49	39.5	29.3
53	12/21/2020	12:44:00 PM	12:45:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	69.8	67.6	53.5	73.7	72.2	59.3	66.6	64.5	47.9	87.6	85.4	71.3	88.6	85.4	72.7	58.5	57.6	56.3	56	55.9	54.9	52.8	50.1	48.7	48		66.4	63.8	60.9	54.2	50.3	49.3	42.3	35.3	28.2
54	12/21/2020	12:45:00 PM	12:46:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73	71.6	57.2	82.3	81.2	63.2	67.5	65.5	51.3	90.8	89.4	75	93.1	91.8	76.6	62.9	62.7	62.2	61.3	60.6	57.7	55.5	52.6	52.2	51.6		66.7	69.6	66.3	56.8	55	52.7	45.5	35.7	27.8
55	12/21/2020	12:46:00 PM	12:47:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71	69.3	57.3	73.6	72.9	67.1	68.2	66.2	48.7	88.8	87.1	75.1	87.3	85.8	84.3	66.1	64.4	62	60.7	60.2	58.5	55	50	49.5	48.7		66	66.5	62.3	57	55.3	53.6	45.1	34.6	27.2
56	12/21/2020	12:47:00 PM	12:48:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.3	73.5	60.2	83.1	82.8	70.4	67.7	66	51.9	92.1	91.3	78	95.5	95.3	84.7	68.3	67.2	65.7	65	63.4	59.2	55.8	52.9	52.6	52		65.9	69.8	69.9	63.6	58	52.7	45.4	37.6	31.7
57	12/21/2020	12:48:00 PM	12:49:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.1	76.3	62.7	87.3	87.1	72.7	70	68.3	53.9	94.9	94.1	80.5	96.2	95.9	85.4	72.2	71.8	71.2	69.6	66	61.1	59.5	55.8	55.2	54.6		68

87	12/21/2020	1:18:00 PM	1:19:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.3	74.6	64.3	80.1	79.7	69.9	69	66.5	52	93.1	92.4	82.1	90.5	90.9	83.2	69.8	69.8	69.1	68.6	68.1	65.5	63	54.8	53	52.1	66.7	69.3	70.4	67.7	63.1	58.6	50	40.6	30.8
88	12/21/2020	1:19:00 PM	1:20:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.1	70.4	55.6	75.8	74.5	59.6	69.8	68	51.8	89.9	88.2	73.4	86.7	85	73.6	59.5	59.3	58.9	58.2	57.9	56.3	55.2	52.8	52.5	52.1	66.3	68.8	63.1	56.7	52.1	51.3	44.3	36.6	28.7
89	12/21/2020	1:20:00 PM	1:21:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.8	71.2	58.6	78.2	77.5	63.9	69.5	66.9	52.3	90.6	89	76.4	88.2	88.2	76.2	63	62.9	61.6	61.3	61.1	59.6	58.1	53.8	53.3	52.3	67.3	67.7	66.3	60.7	54.5	54.5	47.4	38.9	31.1
90	12/21/2020	1:21:00 PM	1:22:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.4	72	60.2	80.7	80.2	67.5	69.5	67.4	51.1	91.2	89.8	78	91.3	91.3	82.4	67.3	67.1	65.7	63.4	63.2	61.9	58.4	52.5	52.2	51.3	67.2	68	67.9	60.4	57	55.8	49.4	43.2	35.5
91	12/21/2020	1:22:00 PM	1:23:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.8	73.6	61	82.2	81.5	69.3	69.6	66.8	51.4	92.6	91.4	78.8	93.1	92	81.3	68.8	68.4	67.7	66.6	66.1	60.4	58.6	52.5	52.1	51.5	67.8	70	69.5	63.4	57.7	56	48.8	40	31.9
92	12/21/2020	1:23:00 PM	1:24:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.2	71.6	60.9	80	79.4	70	69.4	67	52	91	89.4	78.7	92.6	91.8	86.5	69.3	68.2	65.6	64.8	64.4	61.8	59	53.2	52.9	52.1	67	68.8	65.6	59.9	58.5	57.5	50.1	40.6	32.7
93	12/21/2020	1:24:00 PM	1:25:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	70.9	68.5	54.9	72.9	70.6	60.7	69.2	66.6	49.7	88.7	86.3	72.7	86.5	85.9	77.2	60.2	59.6	58.6	57.8	57.3	56	54.3	51.1	50.5	49.8	66.7	66.7	56.7	53.5	52	52	43.8	35	30.1
94	12/21/2020	1:25:00 PM	1:26:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.3	71.5	59.6	76.9	75.8	67.2	71	68.9	50.7	91.1	89.3	77.4	90	87	81.7	66.6	66	63.9	63	62.7	61.3	58	52.1	51.5	50.8	68	69.8	62.7	58.4	55.4	56.8	50.1	40.3	31.5
95	12/21/2020	1:26:00 PM	1:27:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.1	71.9	59.1	81.9	77.1	69.1	70.3	67.9	50.3	91.9	89.7	76.9	94.1	90.1	86	68.2	67.4	64.9	63.6	63.5	58.4	55.1	51.1	50.7	50.4	68	69.7	64.4	59.3	56.7	55.3	48	40.6	35.8
96	12/21/2020	1:27:00 PM	1:28:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.3	73.6	59.6	82.5	81.9	66.4	71.5	69.5	52.9	93.1	91.4	77.4	94.5	91.9	82.6	66.2	65.5	64.8	64.5	64.3	61.3	56.7	53.7	53.2	52.9	69.8	70.7	68.2	61	56.5	55.3	48.3	39.9	31.9
97	12/21/2020	1:28:00 PM	1:29:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.6	73.1	58.9	79.9	79	64	71.8	69.7	52.1	92.4	90.9	76.7	90.6	89	77	63.7	63.3	62.9	62.6	62.5	61.6	56.4	54.3	53.6	52.2	68.8	71.5	65.8	58.8	54.9	55.5	48.1	38.7	30.6
98	12/21/2020	1:29:00 PM	1:30:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.6	75.5	61.5	86.4	86.1	72.1	69.5	67.1	52.6	94.4	93.3	79.3	98	98.1	84.2	71.6	70.9	67.7	64.7	64.3	61	57.7	54.5	54	52.7	69.5	71.2	72.7	63	56.3	54.5	48.6	41.8	35.3
99	12/21/2020	1:30:00 PM	1:31:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76	74.7	61.2	83.4	83.1	67.7	71.1	68.4	54.2	93.8	92.5	79	93.8	93.5	79.5	67.4	66.6	65.2	64.7	64.3	62.5	60	56.8	56.5	55.1	69.6	71.1	70.9	62.1	57.2	57	49.5	40.7	34.3
100	12/21/2020	1:31:00 PM	1:32:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.1	71.5	58	77.9	77.3	64.9	69.2	67.1	50.5	90.9	89.3	75.8	89.4	88.7	76.8	64.6	64.3	63.5	62.9	62	58.9	55.3	51.6	51.1	50.7	67.6	67	67.8	59.1	54.2	53	45.7	38.1	34.2
101	12/21/2020	1:32:00 PM	1:33:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.1	74.1	61.5	85.7	85.2	71.5	69.5	67	51.4	92.9	91.9	79.3	97.3	96.6	91.4	71.3	71.1	68.9	62.2	61.6	60.8	57.8	52.7	51.9	51.6	67.2	72.2	67.1	64.5	58.7	56.1	48.8	40.9	30.2
102	12/21/2020	1:33:00 PM	1:34:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.2	71.4	59.6	80.7	80.2	68.2	69.9	67.5	52.4	91	89.2	77.4	91.3	89.6	82.2	66	63.7	63.3	63	62.9	61.7	59.4	54.5	53.9	52.6	67.5	68.9	64	59.2	55.9	56.5	49	40.5	33.4
103	12/21/2020	1:34:00 PM	1:35:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.7	71.4	57.9	79.3	78.8	63	69.2	67	52.2	90.5	89.2	75.7	91.1	90.5	75.8	62.7	62.6	61.9	61.2	60.8	58.8	57.2	53.7	52.9	52.4	66.4	66.3	68.3	60	53.9	52.4	45.5	38.1	31
104	12/21/2020	1:35:00 PM	1:36:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.9	70.1	58.9	77	75.8	66.1	68.7	66.3	49	89.7	87.9	76.7	90.5	89.2	80.2	65.9	65.6	63.7	62.2	61.9	60.3	57.3	51.9	50.3	49.1	66.4	65.7	64.6	61.6	56	54.2	48.4	40.7	31.2
105	12/21/2020	1:36:00 PM	1:37:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	70.8	68.5	57.9	73.7	72.3	63.4	68.6	65.3	49.8	88.6	86.3	75.7	85.9	84.3	75.8	63	62.1	61.6	61.4	61.2	59	56.6	51.9	51.3	50	66.2	63.7	62.5	57.5	54.4	54.9	47.6	39	29.1
106	12/21/2020	1:37:00 PM	1:38:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72	69.9	58.6	74.5	73.1	63	70.2	67.7	51.5	89.8	87.7	76.4	86.1	84.1	77.5	62.7	62.5	62.3	62.1	61.9	60.6	57.7	52.3	52.1	51.6	67.9	66	62.7	57.3	55.1	55.7	48.3	38.3	30.8
107	12/21/2020	1:38:00 PM	1:39:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73	71.2	61.8	77.9	76.6	69.2	69	66.2	51.1	90.8	89	79.6	88.6	88.1	83.9	68.2	67.3	64.8	64.2	64.1	63.4	61.1	53	51.7	51.1	67.7	66.8	65.5	60	60.4	58.1	50.2	40.2	31.1
108	12/21/2020	1:39:00 PM	1:40:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.3	72.1	60.2	81.1	80.8	66.5	68.7	66.1	54	91.1	89.9	78	91.7	91.6	78.3	66.2	66	64.9	63.9	63.5	60.7	59.3	54.8	54.4	54.1	66	66.3	69.5	60.1	56.4	55.9	48.5	40.4	33.7
109	12/21/2020	1:40:00 PM	1:41:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.6	72.4	60.4	80.5	80	65.6	68.3	65.7	52.4	91.4	90.2	78.2	90.6	90.1	77.8	64.9	64.3	63.2	62.9	62.7	62.1	60.2	54.1	53.6	52.6	66.7	67.6	69.1	61.4	56.9	56.5	49.1	39.8	32.2
110	12/21/2020	1:41:00 PM	1:42:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.8	69.7	58.5	77	74.9	66.7	68.7	66	51.6	89.6	87.5	76.3	90.5	87.9	81	66.1	65.5	64.3	63.3	62.4	58.2	55.4	53	52.6	51.7	67.3	65.3	63.3	59.3	55.8	54.5	48.1	39	29.6
111	12/21/2020	1:42:00 PM	1:43:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	78.1	77.4	70.4	88.9	88.7	83.5	68.6	65.8	52.6	95.9	95.2	88.2	104.3	103.4	100.3	83	82.7	78.3	75	73.1	63.7	60.2	54.9	53.5	52.7	68.5	72.7	69.9	71.2	69.4	66.7	54.7	50.3	39.9
112	12/21/2020	1:43:00 PM	1:44:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.5	71.1	60.2	76.6	75.9	68.1	69.6	66.7	52.4	91.3	88.9	78	88.6	87.7	80.6	67.9	67.4	66.4	63.9	63.1	60.8	58	54.2	53.7	52.6	67.1	67.2	65.2	60.1	57.4	56.7	49.7	42.3	33.5
113	12/21/2020	1:44:00 PM	1:45:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.5	69.1	57.7	75.1	74.2	65.8	68.5	64.9	50.5	89.3	86.9	75.5	87.5	86.9	81.5	65.4	65.1	62.1	60	59.9	57.9	56.5	53	51.3	50.7	66.1	65.3	62.4	59.1	54.8	54.1	46.4	37.7	31.8
114	12/21/2020	1:45:00 PM	1:46:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.5	71.2	59.6	78.2	76	64.2	69.1	66.3	51.7	91.3	89	77.4	91.1	88.9	81.6	63.9	63.4	62.7	62.2	62.1	61.4	59.5	52.7	52.2	51.9	69.4	67.9	62.5	58.5	56.2	56.7	49.5	40.5	32.6
115	12/21/2020	1:46:00 PM	1:47:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.8	71.9	58.5	78	76.8	63.3	70.5	68.2	49.6	91.6	89.7	76.3	88.1	86.7	78.6	63	62.8	62.5	62.3	62.1	59.8	56.6	52.6	50.8	49.8	69.2	69.7	63.2	58.5	54.8	55	48.2	38.7	31.7
116	12/21/2020	1:47:00 PM	1:48:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.9	72.2	59	79.2	77.8	62.4	69.7	67	52.1	91.7	90	76.8	91.1	90.2	76.9	62.3	62.2	62	61.9	61.8	60.8	58.7	54	53.2	52.2	68.4	70.3	64.5	58.1	55.9	55.7	48.6	38.2	30.1
117	12/21/2020	1:48:00 PM	1:49:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.4	75.7	68.5	87.6	87.4	81.4	69.6	67	53.4	94.2	93.5	86.3	104.3	104.1	101.5	80.9	79.9	77.2	73.7	70.5	62.6	59.1	55.4	54.6	53.6	67.5	68.3	70.7	69.8	67.4	64	55.1	46	33
118	12/21/2020	1:49:00 PM	1:50:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	70.7	68.4	55.2	72.7	71	62.5	68.8	66	48.9	88.5	86.2	73	83.9	83.2	78.9	61.7	60.4	59	58.7	58.5	56.3	53.4	50.7	49.6	49	66.7	65.3	60.1	55.5	54	50.7	43.5	35.5	29.1
119	12/21/2020	1:50:00 PM	1:51:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74	71.9	60.1	78.6	75.8	64.3	71	68.6	53.7	91.8	89.7	77.9	89	88.8	77.6	64.2	63.7	62.9	62.5	62.2	61	59.8	57	56.4	54.9	69.7	67.5	66.3	59.1	56.2	57	50.2	42.1	33
120	12/21/2020	1:51:00 PM	1:52:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.3	71.3	61.1	78.6	78	70.8	69.3	66.1	49.7	91.1	89.1	78.9	93.3	93.1	89.3	70.6	69.7	65.5	63.2	62.9	61.9	58.9	52.2	50.4	49.8	68.5	67	65.1	59.5	60.4	56.6	49.8	42.2	34.9
121	12/21/2020	1:52:00 PM	1:53:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.4	70	58.5	75	72.8	64.3	69.2	66.5	48.6	90.2	87.8	76.3	85.5	85.8	79.2	64.1	63.9	62.7	61.9	61.7	60.8	57.5	49.5	48.9	48.7	68.9	66.4	61	58.6	55	55.3	48.4	39.4	30.8
122	12/21/2020	1:53:00 PM	1:54:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.9	70.2	59.8	76.1	75.1	64.7	69.9	67.6	51	89.7	88	77.6	90.7	88.3	79.5	64.4	64.1	62.9	62.3	62	60.9	59.4	55.4	52.7	51.4	66.7	67.2	62.9	58.5	55.9	56.8	50.1	42.6	34.5
123	12/21/2020	1:54:00 PM	1:55:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.6	75.6	63.1	86.5	85.9	75.8	70.2	67.9	48.4	94.4	93.4	80.9	98	97.7	93.8	75.3	74.2	69.8	68	67.6	59.8	57	51.3	49.7	48.9	69.2	74.1	66.3	66.1	62.2	57.5	48.3	40	30.7
124	12/21/2020	1:55:00 PM	1:56:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.7	71.1	60.4	76.1	74.9	64.5	69.5	67.6	54.4	90.5	88.9	78.2	88.1	86.5	79.7	64.3	64.1	63.9	63.7	63.6	62.5	58.5	55.2	55	54.5	66.5	67.3	66.3	60	56.7	56.9	50.7	42.6	33.9
125	12/21/2020	1:56:00 PM	1:57:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.6	70.9	60.7	78.5	77.9	67.6	67.8	64.7	48	90.4	88.7	78.5	90.8	90.2	81.2	67.4	67.1	66.5	64.5	64.1	61.9	58.4	50.3	49	48.1	65.9	66.5	65.8	62.1	57	56.8	50.8	44.4	36
126	12/21/2020	1:57:00 PM	1:58:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.7	69.6	58	76.5	74.5	64	68.7	65.9	49.6	89.5	87.4	75.8	87.2	85.3	77.1	63.9	63.7	63	62.1	61.7	59.3	56.6	51.5	50.6	49.7	66.6	66.1	63.4	57.3	53.9	54.7	48.7	38.9	30.3
127	12/21/2020	1:58:00 PM	1:59:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.2	72.6	62.1	81.7	80.8	66.4	70.8	67.9	52.7	92	90.4	79.9	92.8	91.9	82.4	66.2	65.9	65	64.4	64.2	63.1	61.9	55.8	54.8	52.9	68.4	69.3	66	62.4	59.2	58.6	51.5	43.1	36.5
128	12/21/2020	1:59:00 PM	2:00:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77	75.3	60.2	82.7	81.7	67.2	73.9	72.1	54.2	94.8	93.1	78	94.1	93.3	81.1	67	66.9	66.5	65.3	64.6	61	57.8	55	54.5	54.2	70.9	73.9	67.5	60.2	57.4	55.5	49.4	44.3	40
129	12/21/2020	2:00:00 PM	2:01:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.9	73.9	62.6	83.1	79.7	69.2	70.8	68.4	52.3	93.7	91.7	80.4	96.6	91.6	84.1	68.8	68.1	67	66.7	66.1	64.1	61.9	54.1	52.7	52.3	70.6	69.6	68	64.6	59.3	58.6	51.9	45.8	37
130	12/21/2020	2:01:00 PM	2:02:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.2	71.2	57.6	75.6	73.7	63.7	70.5	68.1	52	91	89	75.4	87.6	85.7	77.4	63.1	62.8	62.5	62.4	62.2	57.7	54.6	53	52.7	52.1	69.5	68.5	61.7	57.2	54.3	54.6	46.3	37.6	30.1
131	12/21/2020	2:02:00 PM	2:03:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.3	69.1	59.4	74.4	72.9	66.2	68.3	65.4	49.4	89.1	86.9	77.2	86.6	85	81.8	66	65.8	64.2	62.9	62.7	62	57.7	50.3	50	49.6	66.6	65.5	61	58	55.9	56.6	49.5	40	33.9
132	12/21/2020	2:03:00 PM	2:04:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.2	72.6	62	77.8	76.6	69	70.6	68.7	53.8	92	90.4	79.8	89.3	88.4	82	68.8	68.5	67.5	65.6	64.2	62.6	60.9	55.6	54.8	53.9	68.3	69.6	65.4	62.9	59.8	58.2	51.3	42.3	34.9
133	12/21/2020	2:04:00 PM	2:05:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	71.1	68.4	56.1	73.6	71.6	60	69	65.9	51.6	88.9	86.2	73.9	85	82.6	74.4	59.9	59.8	59.1	59	58.9	57.7	55.6	52.2	51.9	51.7	66.6	64.6	60	57.3	53.8	52.2	44.8	36	29.2
134	12/21/2020	2:05:00 PM	2:06:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73	70.7	59.3	77.3	75.1	64.1	70.1	67.4	51.2	90.8	88.5	77.1	90.4	87.7	77.9	63.8	63.3	62.6	62.5	62.4	61.7	58.5	52	51.5	51.3	68.8	67.2	62.5	58.9	56	56.2	49	39.1	32.3
135	12/21/2020	2:06:00 PM	2:07:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.4	71.6	59.6	78.8	78.1	65.2	69.9	67.2	50.6	91.2	89.4	77.4	91	90.3	79.2	64.9	64.3	64	63.6	63.3	62.1	56.5	51.3	50.9	50.7	68.7	66.8	66.6	60.7	56.1	55.8	48.2	39.1	34.2
136	12/21/2020	2:07:00 PM	2:08:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.3	70	58.9	75.6	73.4	63.6	69.8	67.6	53.2	90.1	87.8	76.7	86.3	84	79	63.2	63.1	62.5	62	61.8	59.9	58.4	55.6	54.7	53.4	68.7	66.1	60.7	57.2	55.3	56.1	49.1	40.7	32.4
137	12/21/2020	2:08:00 PM	2:09:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.8	73.1	61.3	77.3	75.9	70.3	71.7	69.2	53.8	92.6	90.9	79.1	89.4	88.8	88.7	69.8	68.5	66.4	64.4	63.6	62.1	59.1	54.9	54.4	53.9	69.8	70.7	65.7	60	57.2	57.4	52.1	50.4	45.3
138	12/21/2020	2:09:00 PM	2:10:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.6	74.2	57	87.1	83.8	60.8	69.8	67.3	50.7	94.4	92	74.8	95.6	93.2	76.7	60.5	60.3	60	59.8	59.5	58.5	56.8	51.6	51.3	50.8	74.6	70.1	65.3	58.5	53.5	52.5	45.1	36.3	28.9
139	12/21/2020	2:10:00 PM	2:11:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.4	71.2	60.5	79.2	76.5	64.9	70.6	68	52.8	91.2	89	78.3	97.3	92.1	80.9	64.7	64.4	63.9	63.3	63.1	62.4	59.5	55.6	55.1	52.9	69.1	67.8	62.9	58.9	56.5	57.8	51	41.8	35.6
140	12/21/2020	2:11:00 PM	2:12:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.3	72	59.5	80.1	77.3	64.8	70.5	68	52.9	92.1	89.8	77.3	94.9	92.7	78.4	64.3	64	63.6	62.4	62.2	59.9	58.2	56.2	56	54	71	68.1	63.7	59.4	56.5	56	49.1	41.6	33
141	12/21/2020	2:12:00 PM	2:13:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.7	74	59.7	84	82.6	66.3	71.4	68.8	54.6	93.5	91.8	77.5	92.6	91.6	80.2	65.9	65.1	64	62.7	62.1	60.4	59	55.6	55.2	54.9	70.4	72.4	64.9	60.8	56.6	55.8	48.7	41.9	33.5
142	12/21/2020	2:13:00 PM	2:14:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.5	72.9	61.3	79	78.4	66	71.2	69	52.8	92.3	90.7	79.1	89.2	88.6	80.1	65.8	65.7	65.4	65.1	65	62.4	61.3	54	53.4	52.8	68.4	69.4	68.1	61.4	57.2	57.7	50.7	41.7	35.1
143	12/21/2020	2:14:00 PM	2:15:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.6	71.9	59.1	78.1	75	64.3	70.5	68.1	53.6	91.4	89.7	76.9	93.2	88.8	78.7	64	63.9	63.5	63.1	63	59.8	58.2	54.5	54.2	53.6	68	68.8	66.3	59.8	56.2	54	49.4	43.3	35.5
144	12/21/2020	2:15:00 PM	2:16:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.1	70.8	59	78.6	74.8	64.6	69.1	66.4	51.8	90.9	88.6	76.8	96.4	91.1	81.2	64.4	64.1	63.7	63.1	62.9	59.5	57.4	53.5	52.5	51.9	68.1	67.3	63.4	58.8	56.3	55.2	48.5	40.7	32
145	12/21/2020	2:16:00 PM

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261	12/21/2020	4:12:00 PM	4:13:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.5	71.6	61	77	75.2	72.8	71.2	68.7	50.5	91.3	89.4	78.8	89.5	86.8	85.4	71.4	69.6	66.8	64	63.1	61.4	58.5	51.9	51.3	50.7	69.6	67.8	64.2	59.7	56.1	58.9	49.2	45.1	42.2
262	12/21/2020	4:13:00 PM	4:14:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.9	73.3	59.7	81.7	80.8	63.9	71.1	68.6	51.2	92.7	91.1	77.5	91.7	90.3	78.1	63.7	63.6	63.4	63.1	62.9	61.7	58.2	53.4	52.4	51.3	70	72	62	58.3	55.5	56.9	49.7	39.3	39.4
263	12/21/2020	4:14:00 PM	4:15:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.5	72.9	60.4	77.4	75.8	64.1	69.6	67.7	51.7	92.3	90.7	78.2	92.9	90.9	79.6	63.9	63.7	63.3	62.9	62.7	61.9	60.7	55.3	53.7	52	69.4	71.3	62.4	59.7	58.6	56.8	48.4	41.4	34.3
264	12/21/2020	4:15:00 PM	4:16:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.5	76.3	61.3	86.4	85.5	70	69.6	67.6	51.2	95.3	94.1	79.1	97.1	96.5	81.9	69.2	68.5	65.3	64.5	64.1	62.4	60.8	52.5	51.5	51.3	70.6	74.9	69.6	61.2	57.1	56.9	51	43.5	38
265	12/21/2020	4:16:00 PM	4:17:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74	72.1	57.5	80.2	79	67.3	70.4	68.2	50.8	91.8	89.9	75.3	93.1	91.7	93.4	65.5	63.4	61.6	60.8	60.5	58.8	56	52.2	51.5	50.9	70.7	69.9	60.3	55.9	53.8	54.1	47.6	44.2	40.2
266	12/21/2020	4:17:00 PM	4:18:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75	73.4	59.4	80.1	79.4	64.2	70	67.9	51	92.8	91.2	77.2	95.3	89.9	78.8	63.9	63.5	63.1	62.9	62.7	61.1	58.9	52.5	52	51.1	70.7	70.3	67.4	58.7	55.4	56	48.9	39.2	34
267	12/21/2020	4:18:00 PM	4:19:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74	72.1	58.2	77.8	76.2	63.1	71.3	69.1	50.9	91.8	89.9	76	91.2	87.7	80.7	62.8	62.5	61.9	61.7	61.6	59.9	58	51.8	51.2	51	70.7	69.6	61.5	57.8	55.1	54.9	47.5	39.8	34.2
268	12/21/2020	4:19:00 PM	4:20:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	78.6	77.3	63	86.1	85.8	72	71.3	69.4	51.3	96.4	95.1	80.8	98.2	96.3	90.3	71.7	71.1	69.6	67.8	67.3	62.9	60.7	52.7	51.5	51.4	72.4	73.5	73.7	64.1	59.7	56.9	50.6	42.7	34.8
269	12/21/2020	4:20:00 PM	4:21:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.2	73.4	58.1	81	79.1	64.3	71.4	69.5	52.1	93	91.2	75.9	91.4	90.2	86.7	63.9	63.7	63.2	63	62.6	58.5	55.9	52.9	52.5	52.2	71	71.3	64.7	58.6	55.6	53.5	47.5	41.7	37.5
270	12/21/2020	4:21:00 PM	4:22:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75	73	61.6	81.3	76.5	67.6	71.2	69.3	53.6	92.8	90.8	79.4	97.4	95.6	92.6	67.2	66.7	65.3	64.2	64	63.1	60.4	56.5	56	54	69.7	70.8	64.4	60.1	58.4	58	52	48.1	43.7
271	12/21/2020	4:22:00 PM	4:23:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75	73.5	60.6	80.8	80.1	65.6	71.5	69.3	51.6	92.8	91.3	78.4	91.8	92.5	83.9	65.3	64.9	64.2	63.8	63.4	61.9	60.4	55.9	54.3	52.1	69.9	70.8	67.2	61.5	58.2	56.1	49.5	43	35
272	12/21/2020	4:23:00 PM	4:24:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75	73.6	61.1	80.9	79.8	66.2	70.1	67.9	50.9	92.8	91.4	78.9	94	92.3	85.4	65.9	65.7	64.8	64.1	63.8	62.3	60.8	54.1	51.6	51.1	69.1	71.3	67.1	60.7	57.3	57.7	50.5	40.6	34.1
273	12/21/2020	4:24:00 PM	4:25:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.3	73.7	59	80.7	78.3	64.4	69.1	66.7	53.1	93.1	91.5	76.8	94.5	91.2	79.1	64	63.7	62.1	61.8	61.5	60.7	58.6	54.4	54.2	53.2	69.8	70.7	68.7	60.4	54.9	54.3	47.3	37.7	31.8
274	12/21/2020	4:25:00 PM	4:26:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.9	72.2	59.6	78.5	77.1	66	68.2	66	52.9	91.7	90	77.4	90.2	88.7	79.3	65.7	65	63.7	62.6	62.6	61.2	57.5	53.3	53.2	53.1	69.6	70.1	61.1	60.1	57.2	55.9	49.4	41.4	31.3
275	12/21/2020	4:26:00 PM	4:27:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.1	74.7	60.7	83.3	82.4	66.1	72	70.1	52.8	93.9	92.5	78.5	94.1	93	81.6	65.8	65.5	64.7	64.1	63.7	62.4	59.6	54.9	54	53	71.8	72.4	67.1	60.1	58.4	56.5	48.5	39.6	31.4
276	12/21/2020	4:27:00 PM	4:28:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.4	73.7	60.2	78.1	76.7	64.3	72.6	70.5	51.8	93.2	91.5	78	89.4	87.9	77.2	64.3	64.2	63.4	62.5	62.3	61.6	59.8	55.6	52.6	51.9	72	70.9	64.6	59.3	56.5	57.4	49.8	38.2	29.9
277	12/21/2020	4:28:00 PM	4:29:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.2	73.6	57.1	79.7	78.4	63.2	72.3	70.1	50.7	93	91.4	74.9	90.8	89.2	77.9	62.8	62.1	61.3	60.9	60.6	58.7	55.8	52.3	51.4	50.9	71.9	71.2	64.6	57	55.1	52.3	45.5	39.1	33.9
278	12/21/2020	4:29:00 PM	4:30:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	79	77.7	63.6	86.5	85.8	71.1	72.3	70.6	50.6	96.8	95.5	81.4	96.2	96.2	85.3	70.7	70.4	69.4	68.2	67.9	64.7	61.1	51	50.8	50.7	74.6	73.9	72.7	67.4	60.4	57.2	49.9	39.2	32.6
279	12/21/2020	4:30:00 PM	4:31:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.7	72	56.7	78	76.7	61.6	71.2	69.3	52.4	91.5	89.8	74.5	88.7	88.9	77.4	61.4	61.2	60.7	60.5	60.4	57.9	55.4	52.9	52.7	52.5	68.8	69.7	65.5	57.6	52.5	52.4	45.4	35.9	29.7
280	12/21/2020	4:31:00 PM	4:32:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.5	71.8	61.1	78.2	76.1	68.3	71	68.8	50	91.3	89.6	78.9	95.4	92.9	84.1	68.1	67.6	66.5	66	65.4	62.2	58.9	51.6	50.6	50.1	69.4	68.6	63.2	60.4	58.3	58.2	49.9	41.2	31
281	12/21/2020	4:32:00 PM	4:33:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.4	71.8	58.4	77.5	76.4	66.7	70	68	51.4	91.2	89.6	76.2	89.2	88.7	82.2	66.2	65.8	64.7	63.6	62.9	58	55.2	52.1	51.7	51.5	69.1	69.8	62	57.4	57.1	54.3	46.9	38.7	34.8
282	12/21/2020	4:33:00 PM	4:34:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.8	74.8	61.6	85.5	85	68.2	70.7	68.9	52.1	93.6	92.6	79.4	94.7	94.1	81.6	67.8	67.1	65.8	65.5	65.3	62.2	60.7	53.1	52.6	52.2	68.3	71.3	71.4	62.4	58.3	57.5	50	39.6	31.5
283	12/21/2020	4:34:00 PM	4:35:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.2	72.3	58.7	85	83.3	70.2	69.4	67	50.5	92	90.1	76.5	99.3	95.3	87.2	69.3	67.7	66.4	63.6	63	57.6	53.8	51.3	50.8	50.5	68.4	70.1	64.9	60	55.8	54.2	48.3	42.9	35.2
284	12/21/2020	4:35:00 PM	4:36:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.4	74.1	59.1	83.9	83	63.5	69.7	67.5	50.9	93.2	91.9	76.9	96.5	96.5	78.1	63.3	62.8	62.5	62.4	62.3	61.4	55.6	51.3	51.1	50.9	69.8	72.7	65.3	58.5	55.9	55.6	48	37.8	29.6
285	12/21/2020	4:36:00 PM	4:37:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.2	73.7	57.3	85.7	84.9	64.5	70.6	68.5	52.1	93	91.5	75.1	95.7	95.4	78	64.4	64.4	63	61.3	61	58.1	56	52.7	52.4	52.2	69.9	72.7	63.8	57.5	53.7	53	46.9	38.2	30.8
286	12/21/2020	4:37:00 PM	4:38:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.4	73.5	59.3	80.1	78.7	65.1	71.7	70	54.5	93.2	91.3	77.1	91.6	91.9	78.3	64.4	64.2	63.5	63	61.9	60.5	57.6	55.1	54.8	54.6	71.7	70.3	66.4	59.4	55.8	55.3	49.1	39.9	32.1
287	12/21/2020	4:38:00 PM	4:39:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.2	72.1	57.6	77.9	76.9	62	70.3	68.1	53.3	92	89.9	75.4	89.7	87.7	76.5	61.5	60.8	60.1	59.9	59.7	58.5	57.5	54.1	53.7	53.4	70.4	69.3	64	57.9	54.3	54.1	46.5	37.6	34.4
288	12/21/2020	4:39:00 PM	4:40:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.5	72.1	60.7	80.1	79.8	66.2	69.4	66.8	52.5	91.3	89.9	78.5	94.5	93.3	86.9	65.7	65.5	65	64.1	63.7	61.7	59.8	55.8	53.3	52.6	67.3	68.3	67.7	59.3	58.4	56.9	49.5	40.3	33.6
289	12/21/2020	4:40:00 PM	4:41:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.9	72.4	58.8	78.4	77.5	68	70.9	68.9	52.6	91.7	90.2	76.6	90.1	90	84.1	67.4	66.4	64.3	63	62.1	59.1	56.4	53.7	53.3	52.9	68.8	69.9	65.8	61.2	55.5	54.3	46.9	39.9	30
290	12/21/2020	4:41:00 PM	4:42:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.1	72.1	59.9	76.5	75.3	66.7	72.3	70.3	51.6	91.9	89.9	77.7	88.1	88.8	80.4	66.4	65.4	64.1	63.8	63.6	61.1	58	52.2	51.9	51.7	69.9	69.5	62	61.2	57.1	56.3	48.7	37.7	29.6
291	12/21/2020	4:42:00 PM	4:43:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.1	73.8	60.7	81.2	80.8	67.4	71.5	69.7	53.4	92.9	91.6	78.5	91.6	90.5	83.7	67.1	66.5	64.7	63.8	63.3	61.8	59.7	55.7	54.6	53.5	69.1	70.2	69.6	61.3	58.3	56.2	48.1	36.8	29.6
292	12/21/2020	4:43:00 PM	4:44:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.3	73.3	61.6	81.9	76.7	67	71.3	69.5	53.9	93.1	91.1	79.4	93	89	82.7	66.6	66	65.6	65.2	65	62.7	60.3	56.6	55.6	54.1	69	71	64.9	62.6	59	57.8	50.5	39	30.3
293	12/21/2020	4:44:00 PM	4:45:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75	73	58	79.2	76.7	64.6	72.8	70.8	50.6	92.8	90.8	75.8	88.2	86.2	78.2	63.5	63.3	62.6	62.3	62.1	58.3	56.4	54.7	53.4	50.9	71.6	71	60.3	56.5	56.3	54.4	47	35.3	27.8
294	12/21/2020	4:45:00 PM	4:46:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.2	74.8	60.4	85.7	84.9	65.3	70.4	67.4	49.6	94	92.6	78.2	93.7	93.1	77.6	65.1	64.9	64.2	63.5	63.3	62.5	59	52.8	50.4	49.8	70.2	73.6	65.9	59.8	57.3	56.9	49.3	39.1	30.4
295	12/21/2020	4:46:00 PM	4:47:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.5	72.4	62.6	77.5	76.1	73.4	71.7	69.4	54.6	92.3	90.2	80.4	90.4	88.9	86.5	72	68.2	65.7	63.8	63.4	62.2	60.3	55.8	55.4	55	71	69.5	61.3	58.6	56.5	59.9	55.8	39.4	28.8
296	12/21/2020	4:47:00 PM	4:48:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	Yes	No	17.82mV/Pa	81.6	81	78.1	92.9	92.9	92	73	71.3	54.3	99.4	98.8	95.9	110	109.5	109.4	90.3	89	87.2	84.9	82.3	69.6	63.6	56.4	55.8	54.4	73.5	75.5	69.6	64.6	72.6	77	67.1	58.1	45.3
297	12/21/2020	4:48:00 PM	4:49:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.1	72.4	58.2	78.8	78.3	63	71.6	69.7	51.9	91.9	90.2	76	89	87.8	82.1	62.6	62.4	61.8	61.5	61.1	59.1	57.7	54.8	52.5	52	69.9	69.4	65.9	59	54.8	53.8	46.4	45.5	27.9
298	12/21/2020	4:49:00 PM	4:50:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	82.9	81.6	67.6	93.5	92.3	80.1	72.7	70.8	52.3	100.7	99.4	85.4	105.6	104.8	102.7	79	78	76.7	71.1	70.3	65	60.7	54.3	54	53.6	77.8	80.5	69.8	69.7	66	63.1	55.2	45.6	34.3
299	12/21/2020	4:50:00 PM	4:51:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75	73	58.3	79.3	77.3	62	70.6	68.3	53.1	92.8	90.8	76.1	91.1	88.3	75	61.9	61.7	61.3	60.7	60.2	59.5	57.9	55.1	54.5	53.3	71	70.6	64	60.5	56.1	53.6	46.2	36.5	29.5
300	12/21/2020	4:51:00 PM	4:52:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.2	75.4	61.8	80.3	79.2	64.3	73.1	71.4	57.9	95	93.2	79.6	91.6	91.2	78.1	64.2	64.1	63.8	63.6	63.5	62.9	61.5	59.3	58.8	58.2	72.3	72.8	66.9	63.9	59.8	57	49.4	40.3	32
301	12/21/2020	4:52:00 PM	4:53:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.6	73.9	56.4	78.6	77.1	61.6	71.5	69	50.5	93.4	91.7	74.2	89.9	89.1	74.6	61.2	61	60.7	60.2	59.5	57.3	55.9	52.7	52	50.7	72.2	72	62.7	56.6	52.6	52.5	45.9	35.4	27.9
302	12/21/2020	4:53:00 PM	4:54:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.4	73.7	58.8	79.1	77.4	62.2	71.3	69	51.6	93.2	91.5	76.6	90.4	87.9	77.8	62.1	61.9	61.4	61.1	61	60.3	58.8	52.8	52	51.7	71.9	71.5	63.1	58.2	54.4	55.3	48.9	47	29.8
303	12/21/2020	4:54:00 PM	4:55:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.2	75.7	58.5	82.5	81.7	65.1	71.8	70.2	52.4	95	93.5	76.3	95	94.2	78.4	64.7	64.1	62.7	62.4	62.3	60.3	56.7	55	52.9	52.6	73	73.7	67.6	60.8	54.8	53.6	47	35.7	28.3
304	12/21/2020	4:55:00 PM	4:56:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.2	74.9	60.8	83.3	83	70.3	72.9	71.3	51.5	94	92.7	78.6	94.9	93.7	82.8	70	68.8	65.4	63.2	63	61.1	60.1	52.6	52.1	51.6	71.2	72	69.5	62.8	56.2	56	48.8	39.6	29.8
305	12/21/2020	4:56:00 PM	4:57:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.8	73.3	59.6	82.1	81.2	68.4	71	68.9	52.7	92.6	91.1	77.4	90.9	90	82.1	68.1	67.2	64.2	63.1	62.2	60.2	58.2	54.2	53.5	52.9	69.2	71.7	64.4	61.9	56.2	54.9	48.4	40.1	34.2
306	12/21/2020	4:57:00 PM	4:58:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.1	75.8	59.6	83.9	83.4	65.6	71.7	69.6	52.1	94.9	93.6	77.4	93.2	92.7	82.4	65.4	65.1	64.2	63.4	62.9	60.5	58.8	53.2	52.5	52.2	71.1	74.4	68.8	58.9	56.1	55.3	47.9	39.3	28.4
307	12/21/2020	4:58:00 PM	4:59:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.2	74.5	57.4	79.4	77.7	64.3	72.3	69.9	52.9	94	92.3	75.2	90	89	83.3	63.9	63.1	62	60.9	60	58.2	56	53.7	53.3	53	72.3	73.2	61.3	57.7	55.4	53.1	45.9	38	28.1
308	12/21/2020	4:59:00 PM	5:00:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	83.2	82.2	63.8	95.3	94.4	74.7	73.2	71.5	52.7	101	100	81.6	104.9	103.7	88	74.5	74	71.7	67.9	65.8	60.7	59.7	54.6	54.1	52.9	75.6	80.8	76.8	66.2	57.3	56.1	50	43.4	36.9
309	12/21/2020	5:00:00 PM	5:01:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	77.2	75.4	57.1	81.3	79.8	63.1	71.2	68.8	50.7	95	93.2	74.9	92	90.9	77	62.9	62.6	61.7	61	60.8	58.4	55.8	51.6	51.1	50.8	73.5	74	64	57.1	53.4	53.1	46.1	38.8	27.4
310	12/21/2020	5:01:00 PM	5:02:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.1	74.4	60.3	81	80.6	65.7	70.7	68.6	52.7	93.9	92.2	78.1	91.4	90.2	82	65.4	65.3	64.2	63.3	62.9	61.7	59.5	54.2	53.3	52.9	72.8	70.4	68.8	59.6	56.4	56.3	49.7	42	30.9
311	12/21/2020	5:02:00 PM	5:03:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	76.7	74.1	57.5	80.7	78.3	62.6	73	70.4	53.4	94.5	91.9	75.3	92.1	90.5	76.8	61.9	61.5	60.9	60.6	60.1	58.6	56.7	54.1	53.9	53.5	75.2	69.3	61.9	57.3	54.5	54.1	46.5	37.5	30.4
312	12/21/2020	5:03:00 PM	5:04:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	75.8	74.4	63	79.8	79.2	69.3	71.9	69.5	52.2	93.6	92.2	80.8	91.4	91.1	84.2	68.9	68.6	68.2	67.8	67.3	64.2	60	54.2	53.3	52.5	70.2	70.9	68.4	66.6	60.1	57.6	50.8	42.4	31.8
313	12/21/2020	5:04:00 PM	5:05:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.7	71.8	59.4	78.2	77.3	68.4	71.2	68.6	53.3	91.5	89.6	77.2	91	88.7	84.8	68.2	67.7	64.7	61.4	60.7	59.3	57.2	54.7	54	53.5	69.7	68.7	63.5	61.2	57.1	55.2	47.8	39.2	30.5
314	12/21/2020	5:05:00 PM	5:06:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74	72.4	60.4	78	77.3	67.7	70.2	68	53.4	91.8	90.2	78.2	91.4	88.4	84.5	67.5	66.9	65.5	63.7	63.2	61.5	59.8	54.7	53.9	53.5	68.9	69.7	64.5	62.8	58.9	55.7	48.1	38.6	29.8
315	12/21/2020	5:06:00 PM	5:07:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	72.1	70.1	59.8	75.8	74.9	72.2	69.9	67	51.2	89.9	87.9	77.6	88.8	88	87.2	71.7	69.8	64.7	62	60.9	59.4	57	52	51.6	51.4	68.1	66	63.3	58.4	55.2	57.2	50	42.8	30.4
316	12/21/2020	5:07:00 PM	5:08:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	74.2	72.5	59.5	77.9	77.1	63.6	71.3	68.3	51.8	92	90.3	77.3	88.5	88.3	76.6	63.1	62.8	62.6	62.1	61.9	60.9	58.9	54.6	53.1	52.3	69.9	69.1	66.3	60.7	57	55.1	47.7	37.5	27.9
317	12/21/2020	5:08:00 PM	5:09:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.6	71.3	56	78	76.1	63.4	70.4	68.1	49.3	91.4	89.1	73.8	88.5	87.9	75.7	63	62.8	62.4	61.3	60.7	56	52.7	50.4	49.8	49.4	71.2	67.3	61.4	57.6	53.5	51.5	44.3	34.1	26.6
318	12/21/2020	5:09:00 PM	5:10:00 PM	0:01:00	Auto	Low	Mic	Slow	dBA	No	No	17.82mV/Pa	73.3	71.7	59.3	75.7	74.9	64.2	70.3	67.7	50.6	91.1	89.5	77.1	88.8	87.1	77.6	64.1	63.4	62.8	62.4	62.2	61.4	59.2	52.7	50.9	50.6	68.8	67.9	66.3	60.2	56	55.5	47.9

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APPENDIX E: MANUFACTURER DATA SHEETS

HME

Customer Driven

Memo

Re: Drive-Thru Sound Pressure Levels From the Menu Board or Speaker Post

The sound pressure levels from the menu board or speaker post are as follows:

1. Sound pressure level (SPL) contours (A weighted) were measured on a typical HME SPP2 speaker post. The test condition was for pink noise set to 84 dBA at 1 foot in front of the speaker. All measurements were conducted outside with the speaker post placed 8 feet from a non-absorbing building wall and at an oblique angle to the wall. These measurements should not be construed to guarantee performance with any particular speaker post in any particular environment. They are typical results obtained under the conditions described above.

2. The SPL levels are presented for different distances from the speaker post:

Distance from the Speaker (Feet)	SPL (dBA)
1 foot	84 dBA
2 feet	78 dBA
4 feet	72 dBA
8 feet	66 dBA
16 feet	60 dBA
32 feet	54 dBA

3. The above levels are based on factory recommended operating levels, which are preset for HME components and represent the optimum level for drive-thru operations in the majority of the installations.

Also, HME incorporates automatic volume control (AVC) into many of our Systems. AVC will adjust the outbound volume based on the outdoor, ambient noise level. When ambient noise levels naturally decrease at night, AVC will reduce the outbound volume on the system. See below for example:

Distance from Outside Speaker	Decibel Level of standard system with 45 dB of outside noise without AVC	Decibel level of standard system with 45 dB of outside noise with AVC active
1 foot	84 dBA	60 dBA
2 feet	78 dBA	54 dBA
4 feet	72 dBA	48 dBA
8 feet	66 dBA	42 dBA
16 feet	60 dBA	36 dBA

If there are any further questions regarding this issue please contact HME customer service at 1-800-848-4468.

Thank you for your interest in HME's products.

OCT / 07

POWERLOCK SOUND PRESSURE LEVELS
Individual Fan Study

10HP Tech 21 Dryer

10HP at 1 meter **without** PowerLock	=	92DB
10HP at 1 meter with PowerLock **open**	=	88DB
10HP at 1 meter with PowerLock **closed**	=	85DB

15HP Tech 21 Dryer

15HP at 1 meter **without** PowerLock	=	96DB
15HP at 1 meter with PowerLock **open**	=	92DB
15HP at 1 meter with PowerLock **closed**	=	87DB

On average, a site will appreciate a 30-50% sound reduction, depending on its dryer package, valve cycling, and wash area.

Bob MacNeil
R&D

SOUND LEVEL METER READINGS

MODEL: FT-DD-T560HP2 (60HP T5 TURBINE VACUUM PRODUCER with EXHAUST SILENCER)

READING A: 68 dB(A), 3 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING B: 61 dB(A), 10 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING C: 53 dB(A), 20 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

NOTE: THESE READINGS WERE TAKEN OUTSIDE OF 8'x10'x8' CINDER BLOCK ENCLOSURE WITH CONCRETE SLAB AND WOOD JOIST ROOF.

SOUND LEVEL METER USED:

SIMPSON MODEL #40003 – MSHA APPROVED.
MEETS OSHA & WALSH-HEALY REQUIREMENTS FOR NOISE CONTROL.
CONFORMS TO ANSI S1.4-1983, IEC 651 SPECS FOR METER TYPE.

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